A History of the Giza Necropolis

Volume 2

George A. Reisner

A HISTORY OF THE
GIZA NECROPOLIS

A HISTORY OF THE GIZA NECROPOLIS

VOLUME II

BY

GEORGE ANDREW REISNER

Completed and Revised by William Stevenson Smith

THE TOMB OF HETEP-HERES THE MOTHER OF CHEOPS

A Study of Egyptian Civilization in the Old Kingdom

HARVARD UNIVERSITY PRESS
CAMBRIDGE · MASSACHUSETTS
1955

CONTENTS

page

LIST OF FIGURES . . . . vii–xi

LIST OF PLATES . . . . xiii–xxi

INTRODUCTION . . . . xxiii–xxv

I. THE FAMILY AND GENERAL BACKGROUND OF QUEEN HETEP-HERES I 1–12

II. THE CLEARANCE OF THE SHAFT AND CHAMBER OF G 7000 X . 13–22
- A. The Shaft 13
- B. The Chamber 15

III. THE BED CANOPY AND CURTAIN BOX 23–27

IV. THE TWO ARMCHAIRS, THE BED, AND CARRYING-CHAIR; COPPER TOOLS, ETC. 28–35
- A. The Armchairs 28
- B. The Bed 32
- C. The Carrying-chair 33
- D. Copper Tools and small objects, largely from the area under Bed and Carrying-chair 34

V. THE INLAID BOX WITH ITS CONTENTS AND THE CASE WITH THE WALKING-STICKS 36–47
- A. The Inlaid Box 36
- B. The Beadwork 40
- C. The Box with the Ointment Jars; Other Vessels; the Headrest . . 42
- D. The Gold Bracelet Box and Its Contents; the Toilet Articles . . 43
- E. The Case with the Walking-Sticks 45

VI. THE MUD SEAL-IMPRESSIONS 48–59

APPENDIX I. THE POTTERY 60–89
- 1. Type Forms 60
- 2. Development of Pottery Forms in Dynasties IV–VI at Giza . . 62
- 3. The Pottery from the Hetep-heres Tomb (G 7000 X) . . . 63

page

4. Pottery from the Giza Cemetery 68
  Group A: Jars with rounded or round-pointed base . . . 69
  Group B: Jars with flat base 72
  Group C: Round-bottomed bowls and basins 79
  Group D: Basins and bowls with flat bottom 83
  Group E: Bowl-tables, bowl-stands, and jar-stands . . . 87
  Group F: Ceremonial vessels 88

APPENDIX II. THE STONE VESSELS 90–102

INDEX 103–7

LIST OF FIGURES

1. Plan of a portion of the Eastern Cemetery at Giza as it was at the death of Cheops, showing the position of the tomb of Queen Hetep-heres (G 7000 X) in relation to the king's pyramid temple and causeway, the pyramids of the three queens, and the tombs of Ka-wab and Khufu-khaf. The plan of the Cheops temple is taken from J. P. Lauer, *Annales du Service*, 46 (1947), pl. LXVIII. Through an error, repeated from fig. 6 in *A History of the Giza Necropolis*, Vol. I, the emplacement of the nearly destroyed chapel of the wife of Ka-wab, G 7110, has been omitted from the plan. It lay north of the sloping passage to G 7120 A. A portion of the false-door still remains in place.

2. Boating scene reconstructed from fragments in the chapel of the second Queen's pyramid (G I–b).

3. Attendants and presentation of animals from chapel of G I–b.

4. Fragments of relief from chapel of G I–b.

5. Weathered block with figure of Cheops in relief from his funerary temple.

6 *a, b.* Relief with inscription and figures of Cheops from his funerary temple.

7. Fragments of relief found in the excavation of the Cheops causeway or in the neighbourhood of the Queens' pyramids which may have come from the walls of the court of the king's temple.

8 *a.* E. de Rougé's copy of the inscription on the lost stela of Queen Merytyetes, *Inscriptions Hiéroglyphiques*, pl. LXII.b. Fragment with Queen's titles from G 7110.

9 *a, b.* Two reconstructions of the figures of Queen Merytyetes and Prince Ka-wab from the façade south of the entrance to G 7120.

10. Proposed reconstruction of fragment bearing the titles of Princess Hetep-heres, the wife of the Vizier Ankh-haf.

11. Statue in Cairo No. 46, with the addition of fragment No. 24–12–962 bearing the name of Khufu-khaf.

12. G 7000 X. Plan of stairway and top of shaft.

13. G 7000 X. North–south section of stairway and shaft.

14. G 7000 X. East–west section of shaft with offering niche.

15. Plan of offering niche and shaft.

16. Two pottery jars from offering niche (Type A–II b).

17. Plan and section of one of the limestone bases from the shaft, and marks on six of the seven others.

18. Black paint marks on blocking stones from stairway and shaft.

19. G 7000 X. Plan of chamber with objects in place.

20. Isometric drawing of the chamber looking south from the pit with objects restored to their original positions.

21. G 7000 X. North–south section of the chamber.

22. East–west section of the chamber.

23 *a, b, c.* Bed canopy: joining of copper-cased tenon of left end of front roof beam with left entrance jamb. Also, joining of left roof beam with the jamb.

24. Bed canopy: joining of right jamb with socket in floor beam.

25. Bed canopy: joining of two corner posts with floor and roof beams at back right corner; detail of beetle-headed bolt.

26. Bed canopy: copper casings of joining tenons and sockets on roof and side poles.

27. Fragments of plaster with impressions of hieroglyphs from bed canopy inscriptions. Five of them are cast from the right door jamb giving the Golden Horus name from above the cartouche of Sneferu. Above, perhaps part of the basket *nb* from below the cartouche.

28 *a*, *b*. Side and lid of the curtain box.

29 *a*, *b*. Two ends of the curtain box.

30. Gold figure of the Queen.

31. Details of the armchair with papyrus arms.

32. The armchair with hawk and Neith elements.

33. The bed.

34. The carrying-chair.

35. Mud models of jars and two bone tools.

36. Chisel, punch, and knife.

37. Chisels and punch.

38. Plan and sections of inlaid box, with its contents.

39. Restored box.

40. Inlaid lid of box.

41. Ointment vessels.

42. Ewer and basin.

43. Headrest.

44. Bracelet box.

45. Toilet articles.

46. Case with staves.

47. Mud sealings from tomb of Hetep-heres (G 7000 X).

48. Mud sealing of Cheops from G 2130.

48 *a*. Beadwork restored.

49. Mud sealings of Chephren from G 4430 A.

50. Mud sealings of Mycerinus from G 5190 A and 1457 A; sealing of Shepseskaf from G 5080 B.

51. Sealings without royal names, one from G 5080 B.

52. Sealing of Ne-user-ra from G 7112 A.

53. Sealing of Weserkaf from G 4631 B.

54. Group of sealings ranging from Weserkaf to Pepy II.

55. Sealing of Sahura from G 7663 A.

56. Sealings of Mycerinus, Isesy, and Tety from Mycerinus Valley Temple.

57. Sealings of Isesy from G 4733 E, and 4721 A; Mernera or Pepy II from G 2375 A.

58. G 7000 X. Pottery: wine jars, Type A–II b.

59. G 7000 X. Pottery: bag-shaped pots, Type A–LI.

60. G 7000 X. Pottery: bag-shaped pots, Type A–LI.

61. G 7000 X. Pottery: jar, Type A–II b; one-handled jug, Type B–LIII; bowls, Type C–LXI e and f, C–XXIX, C–XXXII, D–LXXII a, LXXII b, LXXII c, LXXII d, LXXII e, D–LXXIII c = D–XXXIX.

62. G 7000 X. Pottery: neckless shoulder jars, Type B–LV.
63. G 7000 X. Pottery: neckless shoulder jars, Type B–LV.
64. G 7000 X. Pottery: round-bottomed pans and bowls, Type C–LXI a, b, c.
65. G 7000 X. Pottery: bowls with lip spout and ledge handles, Type C–LXI d.
66. G 7000 X. Pottery: bowls with lip spout and ledge handles, Type C–LXI d.
67. G 7000 X. Pottery: flat-bottomed tubs, Type D–LXXI a.
68. G 7000 X. Pottery: flat-bottomed tubs, Type D–LXXI a and b.
69. G 7000 X. Pottery: flat-bottomed tubs, Type D–LXXI b.
70. G 7000 X. Pottery: flat-bottomed tubs, Type D–LXXI b.
71. G 7000 X. Pottery: flat-bottomed tubs, Type D–LXXI b.
72. G 7000 X. Round-bottomed bowl with spout, Type C–XXIX a; flat-bottomed basins and bowls, Type D–XXXV a, b, and XXXVI.
73. G 7000 X. Pottery: flat-bottomed basins and bowls, Type D–XXXVI.
74. G 7000 X. Pottery: flat-bottomed basins and bowls, Type D–XXXVI.
75. G 7000 X. Pottery: flaring flat-bottomed bowls, Type D–XXXIX; pan with concave sides, Type D–LXXIV; models, Type D–LXXIX.
76. G 7000 X. Pottery: bowl tables, Type E–XXI.
77. G 7000 X. Pottery: jar stands, Type E–XXIV.
78. G 7000 X. Pottery: bowl covers and lids, Type G–LII.
79. Pottery group from G 7330 A.
80. Pottery group from G 7330 A.
81. Pottery from Giza mastabas, wine jars, Type A–II b.
82. Wine jars, Type A–II c.
83. Wine jars, Type A–II c.
84. Inscribed vessel, Type II c, from G 2379 A.
85. Traditional offering jars of Type A–IV.
86. Ovoid jars of Type A–VI.
87. Bag-shaped jars of Type A–LI.
88. Collar jars of Type A–LVI.
89. Ovoid jars of Type B–VI.
90. Shoulder jars of Type B–XVIII.
91. Shoulder jars of Type B–XVIII.
92. Shoulder jars of Type B–XVIII.
93. Squat shoulder jars of Type B–XIX.
94. Bag-shaped jars of Type B–LI.
95. Foreign jugs with one handle, Type B–LIII.
96. Two-handled foreign jars, Type B–LIV.
97. Two-handled foreign jars, Type B–LIV.
98. Two-handled foreign jars, Type B–LIV.
99. Neckless shoulder jars, Type B–LV.

100. Models of neckless shoulder jars, Type B–LV.
101. Collar jars, Type B–LVI.
102. Cylindrical jars, Type B–LVII.
103. Barrel jars, Type B–LVIII.
104. High-necked jars, Type B–LIX.
105. Shallow bowls with external rim, Type C–XXVII.
106. Basins of Type C–XXIX.
107. Bent-sided bowls, Type C–XXX a.
108. Bent-sided bowls, Type C–XXX b, c.
109. Bent-sided bowls, Type C–XXX d.
110. Bowls with recurved rim, Type C–XXXII.
111. Bowls with recurved rim, Type C–XXXII.
112. Pans and bowls with plain rim, Type C–LXI.
113. Bowl with contracted mouth, Type C–LXII.
114. Bowls with molded rim, Type C–LXIII.
115. Bowls with molded ridge inside rim, Type LXV.
116. Bowls with roll rim, Type C–LXVI.
117. Basins with spout, Type D–XXXV a.
118. Basins with spout, Type D–XXXV b, c.
119. Basins with recurved rim and spout, Type D–XXXVI.
120. Basins and bowls of Type D–XXXVII.
121. Flaring bowls of Type D–XXXIX a, b, c.
122. Fancy forms, Type D–XXXIX d.
123. Tubs, Type D–LXXI.
124. Bowls with contracted mouth, Type D–LXXII.
125. Pans of Type D–LXXIV.
126. Bent-sided bowls of Type D–LXXVI.
127. Models of basins and bowls, Type D–LXXIX.
128. Bowl-table, Type E–XXI.
129. Tall bowl stands, Type E–XXII a.
130. Small bowl stands, Type E–XXII b.
131. Ring stands of Type E–XXIV.
132. Bread pots of Type F–XXV and offering trays of Type F–XXVI a.
133. Offering tray, Type F–XXVI a, and trays with model granaries, Type F–XXVI b.
134. Alabaster cylinder jars, Type OK I c.
135. G 7000 X. Alabaster cylinder jars, Type OK I d.
136. Alabaster cylinder jars, Type OK I d.
137. G 7000 X. Alabaster cosmetic cylinder jars, Type OK I e.
138. Stone vessels of Type OK I f.

139. Stone vessels of Types OK III and IV.

140. Stone vessels of Type OK V.

141. Alabaster ointment jars of Type OK XIV b.

142. G 7000 X. Alabaster jars of Type OK XV.

143. Stone models of Type OK XV a, c.

144. Stone jars, Types XVI and XVIII.

145. Stone bowls of Type IX.

146. G 7000 X. Stone bowls of Type X.

147. Stone bowls of Types X and XI.

148. Stone tables of Type XII.

LIST OF PLATES

(Objects are listed from top to bottom and from left to right.)

1. The mouth of shaft and stairway of tomb of Hetep-heres (G 7000 X), looking southwest
    - *a.* Plaster covering of mouth of stairway. Photo C 10899.
    - *b.* First course of stone blocking of stairway; in foreground, edge of quarry scarp. Photo B 5633.
    - *c.* Stairway cleared and surface of pit blocking; in distance the first cutting for queen's pyramid I a, which was moved to the west and which appears as a completed pyramid in upper right corner of photograph (note trench for casing now removed). Photo A 3583.

2. Shaft of Hetep-heres
    - *a.* Stairway cleared and first course of filling of shaft removed; plaster covering of second course; looking northeast. Photo A 3586.
    - *b.* Regularly laid blocking stones of shaft, at 24·8 m. level. Photo C 10918.
    - *c.* Irregularly laid blocks in shaft at 5·10 m. level. Photo C 10913.
    - *d.* Blocking partly removed to show entrance of stairway into pit; looking east. Photo B 5660.

3. G 7000 X. Offering niche and objects from shaft
    - *a.* Masonry blocking of offering niche, looking west. Photo B 5662.
    - *b.* Offerings in niche, looking west after removal of blocking. Photo C 10915.
    - *c.* Limestone bases, probably for a canopy. Photo C 10960.
    - *d.* Metal fittings, probably from a canopy. Photo B 5707.

4 *a, b.* Two views of the burial chamber of Hetep-heres as first seen when the blocking of pit had been removed; looking south. Photos A 3682, 3687.

5. The bed canopy of Queen Hetep-heres I
    - *a.* Gold casing of canopy parts lying on top of alabaster sarcophagus and between sarcophagus and east wall; looking south. Photo A 3683.
    - *b.* The restored canopy as set up in the Cairo Museum with other pieces of furniture placed inside. Photo A 6930.

6 *a, b.* Gold casing of canopy projecting beyond southern end of sarcophagus, lying as they had fallen when the boxes of pottery on which they rested had decayed; looking east. Photos A 3948, 3979.

7. The bed canopy and curtain box
    - *a.* Gold casing of bed canopy: poles lying on top of coffin and other parts projecting out to the south where they had rested on boxes of pottery; looking north. Photo A 4370.
    - *b.* Canopy poles and inlaid gold covering of collapsed curtain box lying on lid of alabaster sarcophagus; looking a little north of east. Photo A 4369.

8 *a, b, c.* Hieroglyphic inscription on right jamb of bed canopy. Photos A 6885 to 6897.

9. Details of the joining of the parts of the bed canopy
    - *a.* Join of architrave and right inscribed jamb. Photo B 6068.
    - *b.* Same join, but seen from outer face of jamb. Photo B 8083.
    - *c.* Top of tent pole fitting into copper socket in roof beam. Photo B 8072.
    - *d.* Copper-sheathed base of right inscribed jamb fitting into copper socket. Photo B 8079.
    - *e.* Copper-covered end of roof pole fitting into copper socket in roof beam. Photo B 8076.
    - *f.* Base of pole and copper socket in floor beam. Photo B 8075.

10. Details of bed canopy
    - *a.* Copper fittings showing silver solder. Photo A 4606.
    - *b.* Joint of back corner uprights with roofing beams. Photo B 8071.
    - *c.* Joint of back corner uprights with floor beams. Photo B 8070.

11. The curtain box
    - *a.* South end of box as restored in Cairo Museum. Photo A 8236.
    - *b.* North end of box as restored in Cairo Museum. Photo A 8237.
    - *c.* Gold sheet with inlays from north end of box as first removed from tomb. Photo A 4578.

12. The curtain box as restored in Cairo Museum
    - *a.* Lid of box. Photo A 8255.
    - *b.* East face of box. Photo A 8235.
    - *c.* View of box from south end, showing east face. Photo A 8258.

13. The curtain box before restoration
    - *a–b.* Part of west face of box when gold sheet and inlays were removed from tomb. Photo A 7945.
    - *c.* Gold and inlays of collapsed box lying on coffin after canopy parts had been removed; looking northeast. Photo A 4399.

14. Area at northwest corner of sarcophagus
    - *a.* Gold leaf parts of figure of queen from an unidentified object, perhaps a box. Photo A 8383.
    - *b.* Right side of armchair lying on subsided filling of unfinished cutting in floor of tomb; looking south. Photo B 5889.
    - *c.* Northwest corner of sarcophagus resting on log of wood on subsided filling of floor cutting; armchair partly collapsed in place and partly on subsided filling; looking south across lowest course of pit blocking. Photo B 5880.

15. Gold-cased armchair
    - *a.* Chair as restored in Cairo Museum. Photo A 5044.
    - *b.* Side view of chair. Photo B 6762.
    - *c.* Back view of chair. Photo B 6759.
    - *d.* Parts collapsed on floor; bound papyrus flowers of left arm in position; looking south. Photo A 3765.

16. Gold-cased armchair
    - *a.* Back and right arm. Photo B 6707.
    - *b.* Detail of right arm and back. Photo B 6698.
    - *c–e.* Leg before restoration. Photos B 6273, B 6271, B 6272.
    - *f.* Chair as restored in Cairo Museum. Photo B 6702.

17. The collapsed armchair with inlaid decorations lying in position
    - *a.* Looking south along west wall across area of inlays and gold casing of right arm. Photo A 3706.
    - *b.* A view of chair inlays, a little south of *a.* in area around the two gold palm capitals of north end of carrying-chair poles. Photo A 3718.

18. Inlays from right arm of inlaid armchair
    - *a.* Hawk on palm column, gold and inlays of outer face. Cairo Museum Photo.
    - *b.* Inlays and gold of inner face of same hawk. Cairo Museum Photo.
    - *c.* Flower and feather bands which formed base of hawk panel on outer faces of chair arms. Cairo Museum Photo.
    - *d.* Feather pattern which framed hawk panel at front on right arm and also formed front face of arm rest. Cairo Museum Photo.

19. Hawk panels from arms of inlaid chair
    - *a.* Inner face of left arm. Cairo Museum Photo.
    - *b.* Outer face of left arm. Cairo Museum Photo.
    - *c.* Palm column and claw of hawk from right arm, in position beside vertical flower strip from right border of outer (back) face of chair back; looking west. Photo A 3737.
    - *d.* Wing and other parts of hawk from right chair arm in position beside gold casing from back of carrying-chair seat; looking west. Photo A 3730.

20. Inner face of back panel of inlaid armchair
    - *a.* Faïence inlays of Neith emblems in gold sheet lying face down beside easternmost of two palm capitals of carrying-chair poles; looking south. Photo A 3773.
    - *b.* View of larger area showing matwork inlays and central vertical flower strip of outer face of chair back lying face up on top of gold sheet with Neith emblems which formed the inner (front) face of panel; also part of hawk wing from left chair arm and lion's foot from left rear leg of chair; looking south. Photo A 3765.

21. Inner face of back panel of inlaid chair
    - *a.* Horizontal flower border at top of chair back. Cairo Museum Photo.

      Neith emblem faïence inlays in gold sheets when removed from tomb. Photo A 8381.
    - *b.* Same face of panel lying in position over inlays from footboard of bed; on right, wing inlay of hawk from left chair arm; looking south. Photo A 3813.

22. Inlaid panel from outer (back) face of chair back
    - *a.* Plaster standard of Neith emblem set in background of matwork faïence inlays. Cairo Museum Photo.
    - *b.* Fragments of streamers and standard of Neith emblems, as recovered in position with zigzag mat faïence inlays. Cairo Museum Photo.
    - *c.* Fragments of plaster, Neith emblems. Cairo Museum Photo.
    - *d.* Gold-leaf covering of plaster Neith emblems. Wrongly arranged when it was thought there were four of these instead of only two as is actually the case. Cairo Museum Photo.

23. Outer face of back of inlaid chair
    - *a.* Flower and feather patterns of border and central vertical strip which framed the Neith emblems of Pl. 22. Cairo Museum Photo.
    - *b.* Right vertical strip of flower and feather pattern lying in place (cf. Pl. 19 *c*) beside one of gold framing pieces from back of carrying-chair seat; looking south. Photo A 3748.

24. Gold sheets from box with inlaid lid and inlaid armchair
    - *a.* Above and on left, gold matwork borders from lid and corners of box with inlaid lid. In lower right corner, gold sheets from lower surface of chair arm, probably showing cut where dowel from top of hawk's head fitted into arm rest. Cairo Museum Photo.
    - *b.* Gold matwork sheets from upper surface of arm rests of inlaid chair. Cairo Museum Photo.

25. The bed
    - *a.* Restored footboard of bed in Cairo Museum. Photo B 6735.
    - *b.* Inlays of footboard lying in position after removal of the inlaid chair; looking south. Photo A 3820.
    - *c.* General view of tomb looking south showing bed inlays in position at right angles to west wall and east of them the contents of the box with inlaid lid. Photo A 3824.

26. The bed
    - *a.* Gold casing of leg from foot and head end. Photo B 6159.
    - *b.* Original wood from two bed legs. Photo A 4543.
    - *c.* Gold leg from foot end showing joint between foot and side bar before application of gold casing. Photo C 11664.

d. Reconstructed bed partially set up before inlaid panel had been assembled on footboard. Note long struts to support boarding. Photo B 6589.
e. Reconstructed bed as exhibited in Cairo Museum. Photo A 5225.

27. The carrying-chair
    a. Carrying-chair as reconstructed and exhibited in Cairo Museum. Photo A 4791.
    b. Original wood from inside gold casing of palm capitals. Photo A 4543.
    c. Original wood of panel from side of footrest, with its upper border frame showing carving for mat pattern worked out also in gold casing; curving frame of arm of seat. Photo A 4532.

28. The carrying-chair
    a. Back of the seat of the reconstructed chair. Photo A 4790.
    b. Reconstructed chair as exhibited in the Cairo Museum, viewed from the front. Photo B 6269.
    c. Area beside westernmost of palm capitals of rear poles of carrying-chair, looking south. Gold hieroglyphs from ebony panels lying among parts of inlaid armchair. Note mat covering of upper surface of arm rest of inlaid chair lying beside bed leg against west wall.

29. Hieroglyphic inscriptions (gold hieroglyphs set into ebony panels) from the seat of the carrying-chair.
    a. The horizontal inscription on the inner face of the chair back. Photos B 6186, 6187, 6188.
    b. Upper part of the three vertical strips down the back face of the chair seat. Photos A 4620, 4619.
    c. Lower section of inscriptions from back. Photos A 4619, 4618.

30. The area under the bed and carrying-chair
    a. Southwest corner of tomb, looking south; showing pottery in a decayed box which supported the southern end of bed and carrying-chair. Photo 3938.
    b. Copper tools from under bed and from top of box south of sarcophagus: Nos. 566, 1058: 6, 1058: 4, 565, 1058: 7, 596 (cf. Figs, 36, 37). Photo A 4934.
    c. Copper tools (Nos. 566, 565, 596), bone implements, and mud model jars lying in position under shredded wood from bed (cf. Figs. 35, 36). Photo A 3925.

31. The area in southwest corner of chamber
    a. Decayed wooden box of linen lying south of gold casing of foot bar of bed; southern palm capitals of carrying-chair poles lying in position; looking south. Photo A 3980.
    b. Debris of box of pottery which supported southern ends of bed and carrying-chair, after removal of large pieces of pottery which appeared in Pl. 30 a; decayed remains of linen and potsherds. Photo A 3953.

32. Gold casing from box with inlaid lid and an unidentified object
    a. Above, two gold strips with rounded ends from an unidentified object. Below, gold strips with vertical ribbing which formed the upper border of the gold covering of the box with inlaid lid. Cairo Museum Photo.
    b. One of the unidentified gold strips lying in place under gold casing or arm of carrying-chair; looking south. Photo A 3857.

33. Chest and stave case
    a. Rilled gold sheets and covering for end of lid of box with inlaid lid; circular metal disks from ends of stave case; gold rilled casings for two staves. Cairo Museum Photo.
    b. Metal disks and gold staves lying beside collapsed bracelet box; looking northeast. Photo A 3876.

34. Contents of chest with inlaid lid
    a. Reconstructed box with alabaster ointment vessels as exhibited in the Cairo Museum. Photo B 6500.
    b. The copper ewer and basin.
    c. Ointment vessels and ewer and basin lying in position; looking south. Photo A 3702.

- *d.* Contents of chest and inlays of lid lying on top of collapsed bracelet box; looking a little west of south. Photo A 3744.

35. Inlaid lid of chest
    - *a.* Inlays lying in place on top of collapsed bracelet box; looking east. Photo A 3902.
    - *b.* Inlays giving part of titles and name of Hetep-heres. Cairo Museum Photo.
    - *c.* Upper bands of design on lid. Cairo Museum Photo.
    - *d.* Design with Min emblems; those separated by vertical elements of inlay come from inlaid staff. Cairo Museum Photo.

36. The bracelet box
    - *a.* Lid of box as restored in Cairo Museum. Photo B 6554.
    - *b.* Collapsed lid in place; looking east. Photo A 3985.

37. The bracelet box
    - *a.* The box, with bracelets inside, as exhibited in the Cairo Museum. Photo A 5226.
    - *b.* View of collapsed box with casing of arm of carrying-chair lying on top; looking east. Photo A 3981.
    - *c.* Upper sheets removed to show bracelets in position; looking east. Photo A 3995.

38. The bracelets
    - *a.* Bracelets in position on restored supports. Photo B 6927.
    - *b.* Bracelets in position; looking a little north of east. Photo A 4016.

39. The headrest
    - *a.* The headrest as restored in Cairo Museum. Photo B 6579.
    - *b.* Collapsed casing of headrest in position beside leg of bed; looking west. Photo A 4046.
    - *c.* Bracelets in position and other contents of chest with inlaid lid; looking north. Photo A 4044.

40. Toilet articles
    - *a.* Copper: round-ended razors: nos. 1148, 1150, 1111, 1110, 1147; rectangular razors: nos. 751, 1112, 1113, 1152; copper plate: no. 1121; copper needle: no. 1116; ointment spoon: no. 144. Photo A 4936.
    - *b.* Gold vessels: dish no. 1149, spouted cup no. 1084, dish no. 1146. Photo C 11484.
    - *c.* Gold razors: rectangular: nos. 1151, 1159, 1161; round-ended: nos. 1120, 1149. Nail implement of gold: no. 1117. Photo B 6496.
    - *d.* Toilet articles in position; looking down to west from lid of alabaster sarcophagus. Photo A 4313.

41. Toilet articles
    - *a.* Beadwork and two ivory bracelets. Cairo Museum Photo.
    - *b.* Beadwork in position. Photo A 4112.
    - *c.* Silver vessel in position west of southern end of sarcophagus. Photo A 4281.
    - *d.* Silver boat-shaped vessel. Photo C 11264.
    - *e.* Flints with rounded ends. Photo B 2195 a.
    - *f.* Rectangular flints. Photo B 6494.

42. Stone vessels and basket
    - *a.* Alabaster vessels: Photo B 6261.
        - (1) Vessels of Type OK I d: 1039, 1041; OK XV b: 1030; OK I d: 1042, 1235.
        - (2) Vessels of Type OK I d: 1038; OK XV a (1): 1029; OK I d: 1043; OK XVI b: 1228; OK I d: 1032.
    - *b.* Stone jar, Type OK XV a (1): No. 1234 and lid 1033. Photo C 11325.
    - *c.* Stone vessels in position; looking southeast. Photo A 4138.
    - *d.* Decayed remains of bottom of basket at southwest corner of sarcophagus. Photo A 4299.

43. G 7000 X
    - *a.* Alabaster bowls. Type OK X: no. 581; Type OK IX a: no. 629–639 = 684 (a, b); Type OK X: nos. 625, 657. Photo B 6259.
    - *b.* Wedge-shaped marks on bottom of alabaster sarcophagus. Photo B 6206.
    - *c.* Mud sealings from bottom of the shaft. Photo C 11257.
    - *d.* Empty alabaster sarcophagus after removal of lid; looking north. Photo A 4597.

44. The niche with the canopic chest
    - *a.* Chest after removal of lid showing liquid in compartments. Photo A 4754.
    - *b.* Plastered stones in place blocking niche in west wall. Photo A 4714.
    - *c.* Canopic chest in place in niche. Photo A 4721.
    - *d.* Another view of irregularly cut niche with canopic chest. Photo A 4720.

45. Stone vessels from the Giza mastabas
    - *a, b.* Diorite bowl. Type OK X e: University of California no. 6–19784 (G 1024). Photos C 11964, 11965.
    - *c.* Diorite bowl with name of King Tety. Type OK XI b: 12–12–109 (G 2385 A). Photo C 4465.
    - *d.* Two diorite bowls. Type OK X c: 36–3–21, 23 (G 2001 B, D). Photo C 13706.
    - *e.* Alabaster jar. Type OK XIV a: 33–1–77 (G 2120 A). Photo C 13405.
    - *f.* Diorite bowl. Type X a: 12–11–32 (G 2370 A). Photo C 4466.
    - *g.* Hornblende jar. Type OK V a: G 1031 (University of California no. 6–19764). Photo C 11971.
    - *h.* Alabaster jar. Type OK I d: 38–4–32 (G 2089 A). Photo C 14235.
    - *i.* Diorite bowl. Type OK XI c: G 2024. Photo C 12671.
    - *j.* Diorite bowl. Type OK X c: 35–11–37 (G 2347 a B equals G 5563 B). Photo C 13639. MFA no. 47.1658.
    - *k.* Diorite jar, Type OK III: 37–11–19 (G 2038 d C); black granite jar, Type I f: 37–8–6 (G 7147 B). Photo C 14109.
    - *l.* Alabaster jar, Type OK I d: 34–9–4 (G 1407 A); alabaster bowl, Type IX a: 34–6–14 (G 7330 A). Photo C 13447.

46. Pottery. G 7000 X
    - *a.* Wine jars. Type A–II b: 34–4–1, 5 (Cairo 67757), 3. Photo B 8367.
    - *b.* Bowls. Type C–LXI a: 1047/153, 1047/178. Photo B 8521.
    - *c.* Ring stand and neckless shoulder jars. Photo C 13584.
        - (1) Type E–XXIV: 34–4–53; Type B–LV: 34–3–24 (Cairo 67746), 25, 28 (Cairo 67747), 27, 19 (Cairo 67748).
        - (2) Type B–LV: 34–3–23 (Cairo 67749), 26, 32 (Cairo 67750), 33, 29 (Cairo 67751).
    - *d.* One-handled jug, Type B–LIII: 1711/4 plus 1711/12 (Cairo 67752, 3). Photo B 8528.
    - *e.* Bag-shaped pots and neckless shoulder jars. Photo B 8524.
        - (1) Type A–LI: 1068/212 (Cairo 67717), 1169/271, 1472/114 (Cairo 67720).
        - (2) Type B–LV: 34–3–13, 15 (Cairo 67729), 11 (Cairo 67730), 8 (Cairo 67731).
    - *f.* Bowls and neckless shoulder jars. Photo B 8763.
        - (1) Type C–LXI b: 34–4–90, 87 (Cairo 67683); Type D–LXXII a: 34–4–89 (Cairo 67684); Type C–LXI b: 34–4–91 (Cairo 67685), 34–4–88.
        - (2) Type B–LV: 34–3–21, 22, 30, 45, 48, 42, 34, 20.
        - (3) Type B–LV: 34–3–9, 17, 16, 14.

47. Pottery. G 7000 X
    - *a.* Tub, Type D–LXXI b: 1189/65. Photo C 13569.
    - *b.* Basins. Type D–LXXI a: 1084/6 (Cairo 67631); Type D–XXXV: 1071/53 (Cairo 67632); Type C–XXIX b: 1036/29 (Cairo 67633). Photo B 8519.

- *c.* Basins. Type D–XXXVI: 34–4–40, 35, 38 (Cairo 67706), 41. Photo B 8410.
- *d.* Models of basins and bowls. Type D–LXXIX a and b (Cairo Nos. 67658–67682). Photo C 13435.

48. Pottery. G 7000 X
    - *a.* Bowls. Type C–LXI: 34–4–23 (Cairo 67699), 25, 28. Photo B 8402.
    - *b.* Bowls and pans. Photo B 8412.
        - (1) Type D–XXXVI: 34–4–93 (Cairo 67711), 94; Type D–XXXIX c: 34–4–69 (Cairo 67690); Type D–LXXII c: 34–4–92 (Cairo 67704).
        - (2) Type C–LXI f: 34–4–64 (Cairo 67695), 68, 67, 63 (Cairo 67697).
        - (3) Type C–LXI e: 34–4–62 (Cairo 67694); Type C–LXI f: 34–4–65 (Cairo 67696), 66.
        - (4) Type D–LXXII: 1191/35 (Cairo 67693); Type D–XXXIX b: 34–4–71 (Cairo 67691), 70.
    - *c.* Bowls. Photo B 8764.
        - (1) Type D–LXXII e: 1068/48, 1073/91; Type C–LXI f: 1713.
        - (2) Type D–XXXVI: Pit No. 3; Type C–XXXII: 1050/8 (Cairo 67634); Type D–XXXVI: Pit No. 4 (Cairo 67635).
        - (3) Type C–LXI c: 676/18 (Cairo 67636); Type D–XXXIX c: 1420/7 (Cairo 67637); Type D–XXXVI: Pit No. 5 (Cairo 67635).
    - *d.* Covers and basins. Photo B 8520.
        - (1) Type G–LII c: 34–4–43; Type G–LII b: 49 (Cairo 67641); Type G–LII c: 42 (Cairo 67638).
        - (2) Type G–LII c: 34–4–45 (Cairo 67639), 47.
        - (3) Type D–XXXVI: 34–4–35; Type C–XXIX: 34–4–32 (Cairo 67640).

49. Pottery. G 7000 X
    - *a.* Covers. Type G–LII a: 34–4–46 (Cairo 67645); Type G–LII b: 50, 51 (Cairo 67646). Photo B 8521.
    - *b.* Ring stands. Photo C 13434.
        - (1) Type E–XXIV: 34–4–55 (Cairo 67692), 57 (Cairo 67761), 59, 56.
        - (2) Type E–XXIV: 34–4–58 (Cairo 67762), 60 (Cairo 67760), 61 (Cairo 67759), Pit No. 10.
    - *c.* Pans. Photo B 8411.
        - (1) Type D–LXXIV: 34–4–72, 74 (Cairo 67686), 73.
        - (2) Type D–XXXIX a: 34–4–76 (Cairo 67687), 78, 77.
        - (3) Type D–XXXIX a: 34–4–79, 75 (Cairo 67689), 80 (Cairo 67688).
    - *d.* Bowl tables. Type E–XXI: 34–4–10, 11 (Cairo 67629). Photo B 8375.
    - *e.* Bowl tables. Type E–XXI: 34–4–12 (Cairo 67627), 9, 13, 14 (Cairo 67628). Photo B 8736.

50. Pottery from Giza mastabas
    - *a.* Jars. Photo B 3981.
        - (1) Type A–II c: 14–11–163 (G 5232 A); 14–12–33, 32, 36, 35 (G 5221 A).
        - (2) Type A–II c: 14–12–30, 29 (G 5221 A); 14–11–159, 164 (G 5232 A).
    - *b.* Pottery vessels. Photo B 1683.
        - (1) Type B–LVI: 13–1–509 (G 2409); Type B–LI: 13–1–510 (G 2409 B); Type D–XXXIX d (?): 12–12–163 (G 2381 Z); Type G–XLII: 12–12–162 (two examples, G 2381 Z).
        - (2) Type C–XXXII: 13–1–513 (G 2335 A), 13–1–514 (G 2333 A); Type D–XXXIX a: 12–10–49 (G 2330 A); Type A–II c: 13–1–508 (G 2381 X).
        - (3) Type A–VI: 12–10–72 (G 2300 A); Type F–XXV: 12–10–71 (G 2330 equals G 5380), 12–10–14 (2309); Type B–LV a: 12–10–15 (G 5190 A equals G 2300 A).
    - *c.* Pottery from G 7560 B. Photo B 8792.
        - (1) Type A–II b: 2 frags.: 36–12–13, 14; Type D–XXXIX d: 36–12–21; Type D–XXXIX a: 36–12–11; Type C–XXXII: 36–12–10.
        - (2) Type A–II b: 36–12–17; D–LXXI a: 36–12–22; Type A–II b: 36–12–19; Type D–XXXV a: 36–12–12.

d. Bowls, basins, and jars. Photo B 3979.
  (1) Type D–XXXVII b: 15–12–70 (G 4512); Type D–LXXVI b: 15–1–18 (G 4930 B); Type C–XXIX: 14–12–44 (G 5210); Type D–XXXVI: unidentified.
  (2) Type B–LIX b: 15–11–78 (G 4813 C); Type C–XXIX: 14–12–43 (G 5210); Type B–LIX b: 15–11–78 (G 4813 C).

51. Pottery from Giza mastabas
  a. 'Oil jars'. Type B–LIV: 36–12–15, 16 (G 7560 B). Photo B 8791.
  b. Type B–LIV: G 1224 A. Photo C 5379.
  c. Type B–LIV: 35–8–8, 11 (G 5020 Annex). Photo B 8594.
  d. Type B–LIV: G 1031 A. Photo C 5375.
  e. Type B–LIV: 35–7–7 (G 2387 A). Photo C 13647.
  f. Type B–LIV: 39–5–47 (G 2430). Photo C 14366.
  g. Pitcher, Type B–LIII a: G 1412 A. Photo C 5388.
  h. Type B–LIV: G 2450. Photo C 5352.
  i. Type B–LIV: 13–1–506 (G 2175 B). Photo B 1682.

52. Pottery from Giza mastabas
  a. 'Oil jars'. Type B–LIV: 12–12–569, 570 (G 2381 A). Photo B 1681.
  b. Type B–LIII b: G 1220 A. Photo C 12915.
  c. Stopper on jar from G 1220 A. Photo C 12917.
  d. Type B–LIV: 12–12–571 (G 2381 A). Photo C 3363.
  e. Type B–LIV: 12–12–572, 573 (G 2381 A). Photo B 1680.
  f. Type B–LIV: 40–5–7 (G 2350 L). Photo B 9294.
  g. Mud stopper with seal of Pepy II on 12–12–571 (G 2381 A). Photo A 1001.

53. Pottery from Giza mastabas
  a. 'Oil jar'. Type B–LIV: 35–7–41 (G 2370 B). Photo C 13649.
  b. Seal on oil jar: 35–7–41. Photo C 13640.
  c. Jug, Type B–LIII: 13–10–68 (G 4340 A). Photo B 2092.
  d. 'Oil jar', Type B–LIV: 34–6–17 j (G 7330 A). Photo C 13432.
  e. 'Oil jar', Type B–LIV: G 2379 A. Photo C 13954.
  f. Pitcher and jugs. Type B–LIII a, b: G 1233 Annex 1, 2; 13–10–25 (G 4340 A); 32–12–13 (G 2170 A). MFA Photo C 14663.

54. Pottery from Giza mastabas
  a. Pottery from G 5080 C (old number G 2200). Photo B 8705.
    (1) Type C–XXX b: 33–1–59 c (3 examples).
    (2)–(3) Type C–XXXII: 33–1–59 c (6 examples).
    (4) Type C–XXX a: 33–1–59 f; Type B–LV a: 33–1–59 d; Type C–XXXII: 33–1–59 c (3 examples).
  b. Bowls of Type C–XXX a from G 2381 A. Photo B 1916.
    (1) 12–12–559, 558.
    (2) 12–12–560, 556.
    (3) 12–12–563, 564.
  c. Basins from G 5080 C (G 2200 C). Photo B 8706.
    (1) Type D–XXXV c: 33–1–59 (two examples).
    (2) Type D–XXXV c: 33–1–59; Type D–XXXIX a: 33–1–58.

d. Bowls and basins from G 2381 A. Photo B 1915.
  (1) Type C–XXVII: 12–12–555 (MFA 13.3276); Type C–XXX a: 12–12–557.
  (2) Type C–XXX a: 12–12–561, 562.
  (3) Type D–XXXV a: 12–12–567, 568 (MFA 13.3270).
e. Bowls and basins from G 7330 A. Photo B 8359.
  (1) Type C–XXXII: 34–6–17 s; Type D–XXXVI: 34–6–17 a; Type C–XXXII: 34–6–17 t.
  (2) Type D–XXXV a: 34–6–17 k, i.

55. Pottery from Giza mastabas
  a. Jars. Type B–LIX c: 40–4–8, 11 (G 2440 A). Photo C 14497.
  b. Basin, Type D–XXXV a: 33–1–59 b (G 2200 C equals G 5080 C). Photo C 13843.
  c. Jars. Type A–VI: 35–7–23 (G 2370 A). Photo B 8591.
  d. Basin, Type D–XXXV a: 35–8–7 (G 5020 Annex). Photo C 13652.
  e. Stands. Type E–XXII: 36–3–43 (G 2006 B), 36–2–15 (G 2132 C); Type E–XXII b: 36–3–44, 48, 47, 46, 45 (G 2007 D). Photo B 8673.
  f. Granaries. Type F–XXVI b: 14–2–109 (G 4733 E). Photo C 5687.
  g. Granaries. Type F–XXVI b: 14–2–112, 113 (G 4733 E). Photo C 5686.

INTRODUCTION

IT may seem to the reader a very long time since February 2, 1925, when the photographer's tripod struck a curious patch of plaster which had been laid down to conceal the entrance to the burial shaft of Queen Hetep-heres I. It is indeed more than twenty-five years, but on looking back, it would seem that this time has not been unprofitably spent in dealing with the unique problem which the decayed objects in the underground chamber presented to Dr. George Andrew Reisner and his assistants. It was really possible to undertake a complete survey of the contents of that tomb only after a long period of intermediate study and patient reconstruction of the material. The main lines of the story were brilliantly laid down in 1927 by Dr. Reisner.[1] The succeeding steps of the reconstruction of the furniture were published in preliminary reports in the following years, beginning in 1928 with an article discussing the empty sarcophagus of the queen, the reconstitution of the carrying-chair, and work on some of the smaller objects.[2] In 1929 the gold armchair, the bed, the gold-covered box, and the inlaid silver bracelets which it contained were ready to be delivered to the Cairo Museum with some of the toilet implements, and the work on these objects was again reported.[3]

At this point Mr. W. A. Stewart, who had until then undertaken the reconstruction work, left the Expedition to begin new work in Palestine. He had been aided by Dows Dunham, who with Dr. Reisner, had worked out some of the preliminary steps, and by Miss Marion Thompson (Mrs. Dows Dunham), who accomplished the difficult task of inserting the tiny gold hieroglyphs into the ebony panels of the carrying-chair. Mr. Bernard Rice now began the work of reconstructing the large bed canopy with its magnificent inscriptions which give the titles and name of the husband of Hetep-heres, King Sneferu. This was delivered to the Cairo Museum in 1932, and again Dr. Reisner published preliminary reports.[4] Still another step in completing the work was made, after a lapse of seven years, when Haggi Ahmed Youssef Moustafa of the technical staff of the Cairo Museum finished in 1939 the intricate task of assembling and mounting the exceedingly fragile inlays of the long box which seems to have contained the curtains of the bed canopy.[5]

For some time before World War II, I had been helping Ahmed Youssef to assemble the inlays of the curtain box and at the same time worked over a number of the remaining inlays. The original purpose of these inlays was not yet evident from the records and drawings made by George Reisner, Dows Dunham, and Noel Wheeler as the tomb was being cleared, although elements of the design were well established. Several of these were published in my *History of Egyptian Sculpture and Painting in the Old Kingdom* (1946), figs. 55–59. It is still not understood how the gold-leaf figure of the queen was used (*loc. cit.*, fig. 55), although it is now possible to suggest how the other designs were employed. The work was interrupted by the war and could not be taken up again until the winter of 1946–7. At that time Mr. Dunham and I worked over the remaining material in the Harvard Camp workshop and then delivered it, packed in as secure a fashion as possible, to the Cairo Museum, where it was stored in the basement under the Temporary Registration Number: 18th of April, 1947, No. 5.

---

[1] 'Hetep-heres, Mother of Cheops,' *Bulletin of the Museum of Fine Arts* (Boston), special supplement to vol. XXV, May 1927. See also *Illustrated London News*, March 12, 1927, pp. 436–437; March 26, 1927, pp. 538–539.

[2] 'The Empty Sarcophagus of the Mother of Cheops,' *B.M.F.A.*, vol. XXVI, no. 157, pp. 76 ff., October 1928. See also *Illustrated London News*, November 24, 1928, pp. 958–959.

[3] *B.M.F.A.*, vol. XXVII, no. 164, pp. 83 ff., December 1928. See also *Illustrated London News*, August 24, 1929, pp. 344–345.

[4] *B.M.F.A.*, vol. XXX, no. 180, pp. 56 ff., August, 1932; *Illustrated London News*, May 7, 1932, pp. 767–769.

[5] *Illustrated London News*, November 18, 1939, pp. 757–759.

It had still not been possible to suggest a restoration for the inlaid panels which contained flower elements, hawks with outspread wings, and the standards with crossed arrows and shields of the Goddess Neith (*loc. cit.*, figs. 58, 59). However, in 1949, in once more studying the original tomb records, photographs, and drawings, it finally became evident that these panels were closely connected with the four legs of a second chair which had been known to exist from the time the tomb was first viewed. Gradually the measurements and shape of these inlaid panels, checked painstakingly with the positions in which they had fallen on the floor of the tomb, provided the evidence that they had formed the back and arms of this second chair, and it was possible to restore the piece, at least in a drawing (see Fig. 32). Similarly, a restoration can be suggested for the gold-covered box with the queen's name on the inlaid lid (see Figs. 38–40).[1] It is to be hoped that the Cairo Museum may eventually find it possible to reconstitute the armchair and inlaid box from the very fragile elements which are at present arranged in trays according to their various patterns and packed away in storage (Cairo Temporary Registration No. 18, 4: 47, 5).

It would be difficult to overestimate the debt of gratitude which is owed to Dr. Reisner for the extraordinary planning and execution of such a formidable archaeological task as the clearing of the burial chamber of Queen Hetep-heres I and the preservation of the objects found in it. Every step was accompanied by a thorough photographic record in addition to thousands of drawings and sketches that were made day by day as each fragment, whether large or infinitesimal, was removed, sometimes only with the aid of tweezers and camels'-hair brushes. At almost any stage of the work an incautious decision or a clumsy movement could have irretrievably destroyed evidence. As it is, the material remains after twenty-five years clearly legible in the record and can be controlled, as the writer has gratefully realized in the course of preparing the present publication. What might have remained an inextricable tangle of pieces of gold sheeting if carelessly handled can now be examined as unique pieces of complete furniture in the Cairo Museum and in the excellent copies made by Joseph Gerte for the Boston Museum of Fine Arts (with the technical assistance of William J. Young, Head of the Museum's Research Laboratory).

So important has this work been as an example of archaeological method that it may be useful to insert at the conclusion of this introduction a brief timetable of the progressive steps in the clearance of the tomb. In this way the very important contributions made by a succession of Dr. Reisner's assistants will also be made clear. Perhaps this is the most adequate way in which to emphasize and acknowledge their patience and ingenuity. In addition to those who are mentioned here and in other parts of this introduction, I should like gratefully to list the names of Miss Suzanne Chapman, Mrs. Stephen Weld (Elizabeth Eaton), Alexander Floroff, Nicholas Melnikoff, and Hansmartin Handrick, whose drawings along with my own appear in the text and appendices.

Dr. Reisner has many times expressed his regard for Reis Said Ahmed Said, who died in 1926 while work on the tomb was progressing. He was the father of Reis Mohammed Said Ahmed and Reisner's secretary, Mahmud Said Ahmed, both of whom served him so devotedly in his last illness. Said Ahmed Said was succeeded by his brother Mahmud Ahmed Said, 'El-Meyyet', the father of Duwy Mahmud Ahmed (Reis from 1933 to 1935), who was in charge of completing the clearance of the tomb. The members of this family and the Qufti workmen will always be remembered with affectionate esteem by members of the Harvard-Boston Expedition. It should also be remembered that during the work on the Hetep-heres objects the Expedition was able to avail itself of the valuable technical assistance of Mr. A. Lucas, Honorary Consulting Chemist of the Egyptian Department of Antiquities.

---

[1] See also W. S. Smith, 'The Tomb of Hetep-heres I,' *B.M.F.A.*, vol. LI, no. 284, June 1953, pp. 23–30.

1925

Feb. 19	First record made of pavement concealing entrance to tomb. Reisner absent in America; Alan Rowe in charge of the Expedition, with the assistance of Mr. T. R. D. Greenlees.
Feb. 20–March 6	Clearance of stairway and shaft.
March 8	Removal of stones blocking entrance to chamber; first view of chamber.
March 12	Reisner ordered tomb closed again pending his return.

1926

Jan. 21	Chamber reopened and work commenced. Reisner in charge, assisted by Dows Dunham.
Jan. 22–July 15	Clearance of armchairs, carrying-chair, ointment vessels, bed, inlays of second armchair, and some of the pottery. Dunham left for America on May 4, and Noel Wheeler took up his work in the tomb.
July 16–Oct. 22	Area cleared containing bracelet box at southwest corner of sarcophagus; also the part of the room south of the sarcophagus with the mass of pottery and stone vessels.
Oct. 23–Dec. 16	Clearance of pieces of bed canopy and inlays of curtain box on the lid and in area adjoining sarcophagus. Dunham returned from America on November 12 and joined Reisner and Wheeler in work. Work in abeyance in tomb after December 16 while material removed to camp house was studied.

1927

March 3	Lid of sarcophagus lifted and box found to be empty.
April 18	Sarcophagus weighing 2·2 tons raised out of pit.
May 21	Blocking of niche in west wall removed to reveal canopic box.
May 23	Canopic box removed.

Dr. Reisner in his first report makes the seemingly rash statement that from the records it would be possible to replace every object in the tomb should anyone be so unreasonable as to make such a demand. The reconstructed drawing in Fig. 20 virtually amounts to such an attempt on paper and fully justifies Reisner's claim. It is truly remarkable how the exact notation of every scrap of material allows one to replace each object in the tomb in its former position and to suggest what was its original shape. It is hoped that the reader when comparing the reconstruction with the plan in Fig. 19 and the photographic plates showing the condition of the various objects as they lay decayed upon the floor may enjoy some of the same excited pleasure that the writer experienced in piecing this material together bit by bit. At any rate, he will be spared the fatigue of constantly thumbing through the 1,701 pages of plans, notes, and sketches and the 1,057 photographs which constitute the original record made during 321 working days in which Reisner and his assistants worked in the tomb of the mother of Cheops.

The following text, based on Reisner's record, is written in my own words. I have tried to indicate clearly where a few conclusions differ from Reisner's own, as the result of archaeological discoveries and further study in the years that have elapsed since Reisner's death in 1942.

WILLIAM STEVENSON SMITH

MUSEUM OF FINE ARTS, BOSTON
September 1953

A HISTORY OF THE
GIZA NECROPOLIS

THE TOMB OF HETEP-HERES
THE MOTHER OF CHEOPS

I

THE FAMILY AND GENERAL BACKGROUND OF QUEEN HETEP-HERES I

IN the years which have intervened since the discovery of the tomb of the mother of Cheops, Queen Hetep-heres I, in February 1925, nothing has been found to alter the ingenious explanation which Dr. George A. Reisner offered for the unique reburial of that queen's funerary equipment. The alabaster sarcophagus found in the intact secret tomb at Giza (G 7000 X) should have contained the body of one of the most important ladies of the Old Kingdom. The fact that it was completely empty certainly called for some explanation. Reisner believed that at about the year 15[1] of Cheops's reign it was discovered that thieves had broken into the burial chamber of his mother in the old royal cemetery at Dahshur. At this time all construction work was concentrated at Giza, where the king's pyramid was nearing completion and that of his chief queen was just being started. Strict supervision in the Dahshur cemetery must have been somewhat relaxed as attention was focused on the new project (about 2650 B.C.).

Hetep-heres was the wife of the first king of Dynasty IV, Sneferu, who presented her with the great gold bed canopy which bears his name and titles. She must have outlived her husband, since the objects in her tomb were sealed by the mortuary establishment of her son Cheops. In all probability Cheops arranged for her funeral in a tomb which lay beside the northern of the two pyramids at Dahshur which seems to have been the tomb of Sneferu. Builders' marks have been found in recent years on both pyramids which give the Horus name of Sneferu, Neb-maat. In addition, the cartouche name Sneferu was found twice on the masonry of the southern pyramid, the so-called Bent Pyramid. The type of construction of the northern pyramid is the more advanced of the two, and its casing bears the dates of the 15th and 16th occasions of the biennial cattle count. The first appears on a block at the base of the southwest corner and the second on one of the casing stones higher up on the face of the pyramid. These dates would seem to fall at the end of Sneferu's 24-year reign as given by the Turin Papyrus.[2] In addition to these dates, there is one further piece of evidence which suggests that Sneferu was actually buried in the northern pyramid. This is the decree of Pepy II concerning the administration of Sneferu's funerary temple, which was found in what seems to have been the valley temple of the North Stone Pyramid at Dahshur.

---

[1] From a somewhat doubtful quarry mark giving the 8th occasion of the cattle count found on a block of masonry from the wall of the corridor near the entrance to the Cheops temple.

[2] As Sir Alan Gardiner has recently reaffirmed (*Journal of Egyptian Archaeology*, 31, 1945, pp. 11 ff.), dates are indicated in the Old Kingdom by stating the recurrence of the cattle count which was held every two years. Although Gardiner believes that the year of the first counting followed that of the king's accession which was termed the 'Year of the Joining of the Two Lands', it is not certain that this accession year might not also have been termed that of the 'First Occasion'. One might question whether the two-year periods could not have continued from reign to reign. In this case, if the last counting had fallen in the next to the last year of the preceding king, the following census may have occurred in the first year of the next king. It seems safer to follow Reisner in calculating the actual regnal year by doubling the number of the stated cattle count and then subtracting one year to allow for the possibility that a count was taken in the first year. Unfortunately, the Palermo Stone shows that an exceptional situation existed in the reign of Sneferu. No census was taken in the year after the 6th counting, as one normally should expect, but the 7th and 8th counts fell in successive years. This can be taken to mean that a biennial cattle count was made up until the 13th year (7th occasion), but after that until the end of the reign the counting was made annually. Although this is far from certain, it would allow for an agreement between the 24-year reign given by the Turin Papyrus and the date of the 16th occasion (year 22) on the North Pyramid at Dahshur (Lepsius, *Denkmäler* II, pl. I) as well as a possible 17th occasion (year 23) for Sneferu at Medum (Petrie, *Meydum and Memphis*, III, 190, pl. V). The untimely death of Abdessalam M. Hussein has interrupted work at Dahshur and prevented publication of the inscriptions. He was kind enough to send me photographs of them when they were discovered.

Abdessalam Hussein believed that he had identified the original tomb of Hetep-heres in the small pyramid that lies south of the Bent Pyramid at Dahshur. It was pointed out, however, that the rough builders' marks which suggested the queen's name could really not be convincingly combined as elements of that name. Moreover, the chamber of that pyramid is much too small to have contained the burial equipment. Finally, the blocking is still in place so that only a slim man can wriggle through the hole made by the thieves. There is no possibility that furniture could have been removed from that chamber, much less the alabaster sarcophagus of Hetep-heres. Therefore, it seems best still to look for the original tomb beside the North Stone Pyramid at Dahshur as Reisner did, although he believed at that time that the Bent Pyramid might have belonged to Huni. It seems unlikely that Sneferu can have built three pyramids, and I am inclined to believe that he may have finished the Medum Pyramid for his predecessor Huni, who had all but completed it at the time of his death. This would perhaps account for the later graffiti in the temple of the Medum Pyramid which ascribe it to Sneferu, and would perhaps mean that the dates on the casing blocks, such as the 17th occasion mentioned above, refer to the reign of Sneferu rather than to that of Huni.

Hetep-heres would appear to have been the daughter of the rather shadowy figure, Huni, the last king of Dynasty III. Virtually nothing is known about this king except for a later statement in the Prisse Papyrus that he died and was succeeded by Sneferu. It has been assumed that his daughter who bears the title 'Daughter of the God' was one of those great ladies who carried the blood royal over from one dynasty to the next and that her marriage with Sneferu provided his chief claim to the throne. She lived at that crucial moment when the royal house was in the process of reaching for the first time a summit of absolute power which perhaps was never quite equaled again in Egyptian history. This power is still physically embodied in the two Dahshur pyramids of Sneferu and in those of Cheops and Chephren at Giza. It is ironical to think that such prestige was insufficient to protect the body of Hetep-heres from destruction by thieves not so long after her burial. One can imagine that such an act of desecration would not have been easy to report to Cheops. This makes even more plausible Reisner's explanation that when the news reached the vizier, and when he understood that the greater part of the funerary equipment was unharmed, he ordered the lid to be replaced on the empty sarcophagus and made every effort to convince the king that little damage had been done but that it would be safer to transfer the burial to the new cemetery at Giza. There is every evidence that he succeeded.

The chief point observed from the beginning about the tomb of Hetep-heres at Giza was that it was intended to be concealed and that there never had been any trace of the superstructure with its offering chapel which is normal in the construction of Old Kingdom tombs. The mouth of the shaft itself had been filled with irregularly shaped stones resembling the surrounding surface of the rock and plastered together. The same treatment had been applied to the opening into the short stairway which connected with the shaft near its top. The whole irregular rock surface of the adjoining area had been covered with a layer of limestone gravel debris which formed the street floor of the Fourth Dynasty level. Dr. Reisner has described in detail in *A History of the Giza Necropolis*, vol. I,[3] pp. 70 ff., how the preliminary cutting for the entrance passage of the First Queen's Pyramid (G I–a) and the first course of masonry framing this passage was abandoned. The site of this pyramid G I–a was then shifted some meters to the west where it lay in the corner formed by the east wall of the king's temple and the juncture of the causeway corridor with this wall. A glance at the map in Fig. 1 will suggest immediately that this alteration in plan was caused by the fact that the northern face of the base of the queen's pyramid, as originally planned, would have run very close to the mouth of the shaft of Queen Hetep-heres I (G 7000 X). As Reisner has pointed out, it is also clear that at this time no other structure could have been commenced in the Eastern Cemetery, except for the pyramid temple. The original plan of the First Queen's Pyramid would have covered part of the area later occupied by the mastaba of the Crown Prince Ka-wab (G 7110–7120). The seven other twin-mastabas of the family of Cheops in the Eastern Cemetery were laid out upon a unified plan with that of Ka-wab and could not have been commenced until work on his tomb was begun.

---

[3] Harvard University Press, 1942. In the following text, references to this work will be given simply as *Vol. I.*

I think it must be accepted that, except for the food offering which Cheops deposited for his mother in a niche part way down the shaft of the secret tomb, the funerary services of the queen were intended to be maintained as they were originally endowed in the chapel of her first tomb at Dahshur. Until further excavation has been carried out around the northern pyramid at Dahshur, it is impossible to be sure whether the superstructure of this tomb was in the form of a pyramid. At present no trace of such a pyramid is apparent on the surface of the ground. It is not easy to visualize what form the chapel of such a tomb may have had. In this period we have only private tombs which show either a cruciform chapel or deep niches in the face of the mastaba. These were lined with blocks of limestone and decorated with rather heavy, boldly carved reliefs with figures on a large scale. Such offering niches appear in the tomb of Iyenefer at Dahshur, while at Medum even deeper niches in the form of a long corridor (in the tomb of Nefermaat and Atet) were modified by an addition to the mastaba into the form of decorated cruciform chapel, which we also know at Saqqara at the time of Sneferu.

It is impossible to say how a queen's chapel of the time of Huni and Sneferu might have differed from these cruciform chapels of the great people of the court. Except in the case of the small and very simple chapel of the Medum Pyramid, we do not even have evidence for the form and decoration of a king's temple.[4] It is therefore perhaps worth while to examine what little has survived from the chapels of Cheops's queens. Not very many years can have elapsed between the burial of Hetep-heres at Dahshur and the building of these chapels at Giza. Unfortunately, that of the First Queen's Pyramid (G I–a) has been completely destroyed, leaving only the surface of the rock which had been cleared to take the foundations. The middle one of the three pyramids (G I–b) seems to have been built at the same time, while the third (G I–c) can be hardly much later, although it was placed back a little from the line formed by the eastern faces of the other two. The chapel of G I–c was altered drastically in the Twenty-first Dynasty when it was enlarged to form a temple of Isis of the Pyramids, somehow associated with its original owner, Queen Henutsen. There still remains of the old construction a north–south offering room with entrance in the middle of the east wall. Palace façade paneling covered the outer face of the east wall which perhaps opened on a court. Inside, one niche is preserved at the southern end of the west wall and was perhaps originally balanced by a second niche near the north end of the wall. Two niches certainly existed in the west wall of the chapel of Pyramid G I–b, although little is preserved but the lines of the plan incised on the pavement, and part of the southern end of the west wall. The incisions in the pavement indicate that the chapel consisted of a long north–south offering room entered in the middle of the east wall by a corridor. All three of these chapels perhaps had additions of store-chambers constructed in brick and an open court. The temple of Cheops, itself, seems to have had a fairly simple sanctuary, but this was approached through a large court surrounded by a colonnade of square granite pillars. This makes one wonder if at Medum there had not been planned a court outside the little sanctuary which is now preserved. If so, the plan was abandoned at the death of the king. The court would have lain inside the enclosure wall, not east of it as is the case in the later temples of Dynasty IV.

---

[4] Since this was written, wall reliefs have been found by Dr. Ahmed Fakhry in the Valley Temple of the Bent Pyramid at Dahshur.

In the case of Pyramid G I–b a few fragments of beautifully executed very low white limestone reliefs were found in such a position near the floor level that they must have belonged to the decoration of the chapel. Although very fragmentary, there are elements of inscription that must have belonged to one of the false-doors (see Fig. 4). These false-doors are not of the deep-niche type which occur in the twin-mastabas of the Eastern Cemetery (*Vol. I*, figs. 194, 195) but have the rather shallow form that appears in chapels in the Western Cemetery of the reign of Cheops (*loc. cit.*, fig. 196). Part of a scene showing attendants and a presentation of animals probably came from the west wall between the niches (Fig. 3). More unusual is a representation of a boat being paddled by a number of men, which seems to be one of the earliest examples of a scene showing the voyages from Buto to Heliopolis and the 'Field of Offerings' which appears in private tombs toward the end of Dynasty IV (Fig. 2). As in these later chapels, this may have been placed over the entrance doorway on the east wall.[5]

Since the question of the hypothetical decoration of the chapel of Hetep-heres at Dahshur is intimately bound up with our speculation concerning the decoration of the royal funerary temples of the period of the reigns of Huni, Sneferu, and Cheops, it is perhaps worth considering here a few fragments found in the neighborhood of the three queens' pyramids at Giza which are more likely to come from the pyramid temple of Cheops than from the chapels of his queens. It should be emphasized again here that no trace of anything was found that could possibly indicate that the secret tomb of Hetep-heres possessed a superstructure with a decorated chapel. In my *History of Egyptian Sculpture and Painting in the Old Kingdom*, p. 157, I have pointed out that, contrary to former opinion, there is evidence that part of the funerary temple of Cheops and at least the causeway corridor of Chephren's temple were decorated with limestone reliefs. The chief evidence rests on two blocks that were discovered just before the war when the Cheops temple was cleared. These have now been published by Lauer in *Annales du Service*, 49 (1949), pp. 111 ff., and drawings of the two blocks are given again here in Figs. 5 and 6. The inscription on one block mentions the Pyramid of Cheops, and these reliefs evidently come from the walls of the great court where they would have been protected by the roof of the surrounding colonnade. In the debris of the causeway, near the entrance to the temple were also found a few small fragments which are shown in Fig. 7. These contribute little to a knowledge of the scheme of decoration. More important are two blocks with representations of ships for which I cannot find any close parallels, although fragments from Lisht and from the Weserkaf temple are somewhat similar. They suggest a royal ceremony of a religious nature connected with Buto, and were found in the debris between Pyramid G I–a and G I–c. Inscriptions on several other fragments refer to a queen and, like others, could have come from either the temple or a queen's chapel.[6] It may be that further study of the Fourth Dynasty blocks found reused in the construction of the Twelfth Dynasty pyramid of Amenemhat I at Lisht will be able to establish that they were taken in part from the Cheops temple at Giza. Whatever their source may have been, these Lisht blocks certainly prove that many of the scenes we know from the royal funerary temples of Dynasty V were already anticipated in Dynasty IV. However, not until the area around the two pyramids at Dahshur has been excavated, will we be able to know whether satisfactory evidence for the decoration of royal temples and queens' chapels has survived in this most important period of its development. It cannot be too often stated how important it is that work be undertaken at Dahshur.

---

[5] The whole group of fragments can be briefly summarized as follows:

(1) Probably from architrave over false-door: No. 24–11–286 b. Horizontal inscription in large hieroglyphs reading: . . . [*nśwt*] *sꜣt wrt ḥtś* . . . (see Fig. 4; also Smith, *A History* . . . pl. 38).

(2) Two fragments, probably from the tablet of one of the false-doors: (a) 24–11–242 a: ewer and basin and on right one register of offerings. Above, part of queen's title *wrt htś*; (b) part of offering list with name of green eye-paint *wꜣḏt*. See Fig. 4.

(3) Number 24–11–286 c could be placed on the back of the outer niche of either of the false-doors or in space north of northern niche. Traces of border block-pattern in green and blue and, on right, part of an offering bearer who held up a jar on each side of him. Above: *ỉnt*. . . . See Fig. 4.

(4) Fragments of a boat being paddled to right: Nos. 24–11–242 and 286. See Fig. 2 (Smith, *loc. cit.*, pl. 38).

(5) Perhaps from west wall between two niches: two groups of fragments that appear to belong together. Parts of three registers of figures proceeding to right. Above, only the feet of a woman; in the second register, the feet of a dwarf and a woman in a green dress with a distorted shoulder. These figures approach a dais on which was probably a seated figure of the queen. The third register ran beneath this and contained a man leading an ox (over which is written *ỉwꜣ*) towards what may be a pile of offerings. See Fig. 3 (Smith, *loc. cit.*, pl. 38).

(6) Four fragments with traces of inscriptions: (a) the legs of an estate figure in front of which is written . . . *w* determined by the town sign. Behind the figure is . . . *w* which must have formed part of the name of a second estate; (b) 24–11–286 k: part of a vertical inscription: . . . *b* . . *ḥmt* [*nśwt*]; (c) 24–11–242 e: perhaps from same inscription: . . . [*nśw*]*t bỉty* . . .; (d) 24–11–242 f: perhaps also from same inscription: . . . [*Ḫ*]*wf*[*w*] . . . *b* . . . (see Fig. 4).

At least five more unintelligible fragments were found, one with the sign *nśwt*, but these add nothing to an interpretation of the pieces.

Queen Hetep-heres is entirely unknown, except for the meager information supplied by the titles given upon objects in her tomb. Her name was adopted by a number of other ladies of the following period, the most important of whom politically was probably her granddaughter, Hetep-heres II. This lady was the wife of the Crown Prince Ka-wab and later the wife of King Dedef-ra. She is represented in the rock-cut tomb of her daughter Queen Meresankh III (G 7530–7540). It is relevant to speculate a little about Hetep-heres I on the basis of what is known about family relationships at Giza. Assuming that the Turin Papyrus is correct in assigning 24 years each to the reigns of Huni and Sneferu and 23 years to Cheops, it is possible to make certain deductions. Two sons of Cheops are known to have reached middle age at the end of his 23-year reign. The Crown Prince Ka-wab must have died at about the same time as his father, since another son, Dedef-ra, succeeded to the throne. Ka-wab appears in his daughter's tomb (G 7530–7540) as a portly man of mature years. Prince Khufu-khaf is also shown as a fat man beyond his first youth in his tomb (G 7130–7140) which was being completed in the last year of his father's reign (that of the 12th cattle count).[7] Cheops must therefore have been a man beyond his early twenties when he ascended the throne at the end of Sneferu's 24-year reign. This would imply that Sneferu married Cheops's mother, Hetep-heres, some time in the latter part of the reign of Huni, if we estimate roughly that a man's first son would have been born when he was about eighteen. There is a suggestion here that the marriage of Sneferu and Hetep-heres was intended to secure the succession, and one wonders whether the occasion for this may not have been the death of the owner of Mastaba No. 17 at Medum, who may well have been the heir to the throne of Huni.

---

[6] These fragments on Fig. 7 can be summarized as follows (1–8 from causeway):

(1) 24–11–548: red granite fragment with hawk in sunk relief, which probably surmounted the king's Horus name on one of the columns of the temple court.
(2) 37–3–4 d: white limestone relief of hawk from inscription.
(3) 37–3–4 c: part of vulture protecting king as in Fig. 5.
(4) 37–3–4 h: small figure apparently carrying one of door-pivots of temple.
(5) 37–3–4 i: hand of small figure holding staff.
(6) 37–3–4 b: head of goat.
(7) 37–3–4 g: hand holding opened papyrus scroll.
(8) 37–3–4 f: two unintelligible fragments.
(9) 24–11–889: oars from large boat; from debris of G I–a.
(10) 24–12–14: two boat paddles against water; from north of G I–a.
(11) 24–12–545: above a border with stars are shown ropes which suggest the rigging of a ship; below, a hieroglyph which may be *šśp*, from area between G I–a and G I–b.
(12) 24–12–546: curved line of a boat above a rectangle of water; above, in large hieroglyphs, *pr nsr* (determined by a shrine). From area between G I–a and G I–b.
(13) 24–12–97: from two vertical lines of queen's titles: (1) .... *mꜣꜣ Ḥr* [*Śtẖ*] ...; (2) ... [*wrt*] *ḥtś* ... From debris north of G I–a.
(14) 24–12–57: figures of girl and boy. Girl called ... *H̱wfw* and boy named *Ḥr* ... (probably the name of *Ḥr-ḏd-f*, the son of Cheops buried in G 7210–7220). If these are children of Cheops, they may have been shown either in his temple or in the chapel of his chief queen. From debris north of G I–a.
(15) 24–11–473: small male head; from debris north of G I–b.
(16) 26–2–24: arm of man leading an ox; from debris of G I–c.
(17) 24–11–922: head of *aleph* hieroglyph; from debris east of G I–a.

[7] We must assume here that Khufu-khaf adopted this name at the time of his father's accession, much as Nefer-seshem-ptah, who is shown in the reliefs of the Unas causeway, took the name Uza-ha-Tety when King Tety came to the throne.

It is now clear that Queen Meresankh I, who is mentioned in a later graffito in the temple of Medum, is not Sneferu's wife but his mother, as she appears on the Cairo fragment of the Palermo Stone.[8] Meresankh seems to have been a minor queen, but one in a position of such favor that she was able to bring her son to the throne. Her position as queen-mother was such as to give her the prominence that is implied by the popularity of the name for ladies of the Fourth Dynasty. Another name, like Meresankh and Hetep-heres, frequently employed in the Old Kingdom, is that of Merytyetes. It appears as the name of a queen on a stela found at Giza by Mariette. He does not state exactly where it stood in the Eastern Cemetery, but since he compares the dress of the lady with that of the mother of Khufu-khaf, there is a slight implication that he may have found it somewhere nearby when he was excavating the mastaba G 7130–7140. The stela has since disappeared, although it was copied by de Rougé (Fig. 8).

Merytyetes, in addition to other titles of a queen, calls herself *wrt ḥtś* of Sneferu and Cheops and 'honored before' (*ỉmꜣḫw ḫr*) Chephren. Two fragments which can be plausibly restored on the façade of the chapel of Prince Ka-wab (G 7120), south of the entrance to the inner offering room, seem to reflect the composition of the scene where Khufu-khaf is shown with his mother, a queen who was probably Henutsen, the owner of G I–c (Fig. 9; compare Smith, *A History* . . . pl. 44). The inscription restored with another fragment, on the right in Fig. 9, is unique but seems to read: (*a*) '[Her son, her beloved Ka]-wab'; (b) The daughter of her God, [She who is in charge of] the affairs [of the *ỉmꜣt* (Harem?)], Merytyetes, [his mother] who bore (him) to Khufu.' However we reconstruct this inscription,[9] it gives clearly the name of Merytyetes and suggests the titles of a queen as well as a relationship to Cheops. A small fragment with the queen's title *smꜣwt* [*nbty*] *mry* found in the chapel of Ka-wab's wife (G 7110)[10] suggests that the queen was again represented in this twin-mastaba. The northern chapel must have been originally assigned to Hetep-heres II who would only have been given the title of princess before her marriage to Dedef-ra. It may be a coincidence that the arrangement of the signs on the fragment corresponds closely to the way they are written on the Mariette stela (Fig. 8), but it certainly does make one wonder whether the Merytyetes stela could have been set up during the reign of Chephren in the chapel of G 7110.

The position of Ka-wab's tomb makes it certain that he was the son of Cheops's chief queen buried in the Pyramid G I–a. The above evidence would strongly suggest that this chief queen was Merytyetes and that the mother of Ka-wab and the owner of the Mariette stela were the same person. It has been assumed that the inscriptions of the Mariette stela implied that Merytyetes was the wife of both Sneferu and Cheops and that as an old lady she also entered the harem of Chephren. However, if Cheops married Merytyetes within the first ten years of the reign of Sneferu, he would have ascended the throne at the age of about thirty-five and died at the end of a 23-year reign when his eldest son, Prince Ka-wab, had reached the age of about forty. Even if these deductions are only approximately correct, Merytyetes would have occupied an important position throughout a large part of the reign of Sneferu as wife of the heir apparent. It would not be surprising, then, if in her old age, two reigns later, she should give herself the same title of *wrt ḥtś* during the reign of Sneferu that she did during her husband's later reign. In the time of Chephren she simply states that she was in an honored position, and it should be noted that she was apparently not his mother. She should have been buried in Pyramid G I–a.

---

[8] B. Grdseloff, *Annales du Service*, 42 (1943), p. 118; kindly confirmed and amplified by Prof. Černy, who first read this name on the stone.

[9] There are such strong objections on philological grounds to the reconstruction which appears on the right of Fig. 9 that in the *Journal of Near Eastern Studies* ('Inscriptional Evidence for the History of Dynasty IV'), 11 (1952), p. 114, fig. 2, I have used only the more certain reconstruction of two of the three fragments shown on the left of Fig. 9. However, the unique nature of the three fragments leads me to publish here the two drawings, side by side, in the hope that they may lead to a better interpretation of the inscription.

[10] The emplacement of this chapel north of the sloping passage to Ka-wab's burial chamber has inadvertently been omitted from the sketch plan in Fig. 1, as on the map of the Eastern Cemetery in *Vol. I*. The stones forming part of the false-door are inadequately shown in fig. 6 of *Vol. I*. It is planned to reproduce a more complete plan in Volume III of this series.

It looks very much, then, as though Merytyetes and Cheops were children of Sneferu and Hetep-heres and were both born in the later part of the reign of Huni. In this case Cheops need not have been more than fifty-eight at the time of his death. Hetep-heres might have been nearly sixty if she died within the first decade of Cheops's reign, while Merytyetes would have been in her late sixties in the first five years of Chephren's reign. The three great ladies of the early part of the dynasty were, then, Meresankh I, a minor wife of Huni and the mother of Sneferu; Hetep-heres I, the daughter of Huni's chief queen and the wife of Sneferu and mother of Cheops; and Merytyetes I, the daughter of Sneferu and Hetep-heres and the wife of Cheops. Hetep-heres seems to have been deprived of her title of queen mother by the untimely death of Prince Ka-wab and the accession to the throne of Dedef-ra, who seems to have been the son of the unknown queen buried in G I–b. Dedef-ra's successor, Chephren, appears as one of three sons of Cheops in the Westcar Papyrus where he relates a tale about a magician in the time of the Third Dynasty king Neb-ka. It has been suggested that in the lost beginning of the papyrus it was possibly Ka-wab who told of an incident that occurred in the reign of Zoser. In turn, after Chephren, another son of Cheops, Baw-f-ra, describes a feat performed by the magician Zaza-m-ankh for King Sneferu, and Dedef-hor introduces to Cheops a magician named Dedi who lived in his own time. The tomb of Dedef-hor (G 7210–7220) adjoins that of Ka-wab on the east, and Reisner was inclined to identify the nameless vizier of the next tomb (G 7310–7320) as Baw-f-ra on the basis of his appearance with Dedef-hor in the Westcar Papyrus. Both these princes were then probably, like Ka-wab, the sons of Queen Merytyetes, while their sister was Queen Meresankh II, who was buried in G 7410–7420. Chephren, on the other hand, does not seem to have been a son of Merytyetes, since in his reign she does not call herself 'Mother of the King of Upper and Lower Egypt'. In spite of this, Chephren seems to have regarded himself as a representative of the main (or Giza) branch of the family in opposition to the descendants of the second queen of G I–b. The evidence for the Libyan origin of this queen rests only on the 'red' or 'yellow' hair of her supposed daughter, Queen Hetep-heres II, shown in the tomb of Queen Meresankh III. Caroline Ransom Williams long ago pointed out that the red lines across the yellow surface of her headdress must be interpreted as conventional drawing lines, while I have called attention to a similar headdress worn by Zoser's queen, the lady of the Bankfield Stela, and the mother of Khufu-khaf.[11] Since Reisner has identified the lady represented with Khufu-khaf in G 7140 as Henutsen, the owner of the adjoining Pyramid G I–c, it is unlikely that her hair as well as her dress would so much have resembled those of Hetep-heres II unless they were the fashion of the period. Mariette also describes the figure of Merytyetes on her stela as having a pointed shoulder to her dress like that in G 7140. It would seem that we are dealing with a wig somewhat like the king's head-cloth in shape and that it is unsafe to give an ethnic interpretation to the yellow coloring which happens to be preserved only in the case of Hetep-heres II.

While it seems a pity to spoil the romantic legend of the 'red-haired queen', it would appear probable that Hetep-heres II, like her husband Ka-wab, was a child of Cheops and Merytyetes. It was intended that this pair of favorite children were to be buried in the first twin-mastaba (G 7110–7120) to be built in front of the pyramid of Merytyetes. We have also seen that a queen was represented in the chapel intended for Hetep-heres as well as in that of Ka-wab. It is also likely that Dedef-ra, who already had a chief queen named Khentet-n-ka, married Hetep-heres in order to strengthen his claim to the throne by an alliance with a princess of the direct line.

---

[11] Smith, *A History of Egyptian Sculpture and Painting in the Old Kingdom*, pp. 134, 143, 262, fig. 48, pl. 44.

Even though we reject the Libyan origin of Dedef-ra, this does not alter the fact that his reign interrupts the line of Giza kings. He set himself apart by beginning a new royal cemetery at Abu Roash, and all work seems to have stopped at Giza on the tombs of Cheops's favorites in both the Eastern and Western Cemeteries. It is significant that among the tombs in the Western Cemetery which were in the process of being enlarged with an addition of heavy masonry and an interior chapel only that of Hemiunu (G 4000) was finished in about the year 19 (*ḥꜣt sp* 10). Work on the chapel of Prince Seshat-sekhentiu (G 2120) ceased in the year of the 12th counting, the last year of the reign of Cheops when the tomb of Khufu-khaf (G 7130–7140) in the Eastern Cemetery was being completed. The second and third tombs in the southern row of that cemetery (G 7230–7240 and 7330–7340), which could have originally been assigned to Dedef-ra and Chephren, were completed with rubble and brick chapels, while that of Prince Min-khaf (G 7430–7440) was not finished until the reign of Chephren. Reisner has shown in *Vol. I* that Cheops's original plan for the cores of the eight twin-mastabas did not include interior chapels. However, the idea of enlarging these tombs and introducing interior chapels was conceived in the reign of Cheops, since the name of one of his working gangs (*Ḥrwy Nb rḫw* [not *tḫw* as formerly read] *ꜥprw*) was found on casing stones along the eastern face of the finished mastaba of Dedef-hor (G 7210–7220). The quarry marks on the casing of his mastaba show that Hemiunu began to case the west face of the core of G 4000 in the year 15, but it was not until the year 19 that he completed the addition on the east face, which contained an interior chapel. This tends to confirm the date of year 15 from the Cheops temple and the introduction shortly afterwards of the interior chapel in the Eastern Cemetery.

During the eight years of Dedef-ra's reign no royal assistance seems to have been given to any project at Giza that remained incomplete at the death of Cheops. Many members of Cheops's family had reached an advanced age and evidently died natural deaths during this reign. Such finishing touches in rubble and brick were given to the incomplete chapels as the slender resources of their owners could now provide. These people were out of favor at court, but the malicious erasure of Dedef-hor's inscriptions may indicate that more drastic action was taken by Dedef-ra against the children of the chief queen.[12] These princes may have been executed, although Merytyetes herself survived into the next reign. Thus at the death of Dedef-ra, Chephren and Min-khaf may have been the only surviving sons of Cheops. Perhaps they were children of Queen Henutsen and younger brothers of Prince Khufu-khaf. This would explain why Chephren felt that he was restoring to power the legitimate branch of the royal house, although not himself the son of the chief queen of Cheops. He was probably aided by Prince Ankh-haf, who we will see was of an older generation, and by Nefermaat, a grandson of Sneferu, who seems to have been Chephren's third vizier in turn after Ankh-haf and Min-khaf. Hetep-heres II cannot have been loyal to her second husband, Dedef-ra, since her daughter by Ka-wab, Meresankh III, was married to Chephren, and Hetep-heres herself returned to Giza for burial. The pyramid of Dedef-ra was perhaps never completed, but its present terribly wrecked condition probably owes much to a reprisal undertaken by Chephren to avenge the ill-treatment of members of the Cheops family at Giza.

While these speculations as to the later development of family history in Dynasty IV may seem to be taking us rather far afield from the lifetime of Hetep-heres I, they are nevertheless pertinent, since she was the ancestress of the great men of the dynasty. Not only were the kings of Dynasty IV her direct descendants but she was the mother of the famous wise man Dedef-hor and related to all the viziers who served from the creation of that office in the reign of her husband Sneferu until the beginning of Dynasty V. As part of the system of keeping all government control in the hands of the royal family, these viziers seem frequently to have been the eldest sons of minor queens. By granting the highest office in the land to men who by reason of their birth might aspire to the throne, it was evidently hoped to bind them more closely in loyalty to the king. The first man whom we know to have held this office was Prince Nefermaat of Medum. His son, Hemiunu, was a grown man with important titles when his father constructed his tomb at Medum. He is almost certainly the same Hemiunu whose statue shows him as a portly man of advanced age when as vizier to Cheops he was constructing his own tomb at Giza in the nineteenth year of that king. Therefore, it would seem reasonable to place Nefermaat as a son of King Huni, particularly now that the Medum Pyramid seems to belong to that king rather than to Sneferu.

---

[12] Junker, on the other hand, has suggested (*Giza*, VII, 1944, p. 26) that the destruction of Dedef-hor's chapel occurred in the troubled times after the fall of the Old Kingdom. He produces interesting evidence for a cult of Dedef-hor as early as the late Old Kingdom resembling that of the Vizier Kagemni at Saqqara. In a little tomb attached to the mastaba of Seshem-nofer (G 4940) in the Western Cemetery, a man says that he was 'honored before Dedef-hor' (*imꜣḫw ḫr Ḥr-ḏd-f*). Here there is no association between this tomb and that of Dedef-hor (G 7210–7220) as in the case of the followers of Kagemni who were buried around that vizier's great mastaba. It might be that by this time Dedef-hor was only known by his writings as was the case when the much later 'Song of the Harper' was composed.

Nefermaat, as far as we can determine, was followed in the vizierate by Kanofer, the eldest son of Sneferu by a minor queen. This was perhaps towards the end of the reign, since there is reason to believe that only mature or elderly statesmen were considered fit to serve in a position of such responsibility. It also should be assumed that it was an office not lightly cast aside. It is extremely unlikely that retirement would be granted except on the grounds of serious ill health or extreme age. The disfavor of the king would probably have resulted in death, and we should hardly expect to encounter a case where a vizier would be able to build a large tomb after he had laid aside the office. In the case of Kanofer, his tomb at Dahshur in the old Sneferu cemetery has as its only decoration a stela which was inscribed for his father by a son who was evidently named after Cheops's eldest son Ka-wab. The long inscriptions are in sunk relief, which is known first in Min-khaf's tomb in the reign of Chephren. Kanofer also has a daughter named Kha-merer-nebty, a name which we know first as that of the wife of Chephren, although it could have been familiar to Kanofer fairly early in the reign of Cheops, and like that of Ka-wab, adopted for one of his own children. It is then possible that Kanofer remained vizier for a few years under Cheops until Hemiunu took over the vizierate. It is perhaps not too fanciful to see in Kanofer a disgraced vizier whose proper funerary cult could not be undertaken until the reign of Chephren.

For our present purposes it is Hemiunu who is the most interesting of these viziers, since we have seen that he was building his tomb in the year 15 when it has been suggested the secret tomb of Hetep-heres was prepared at Giza. Since like other viziers he also held the position of Overseer of all the King's Works, he was probably responsible for the greater part of the work on the Great Pyramid, even though his predecessor may have worked out the plans for that structure. It would seem almost certain that he was the man who undertook the delicate task of convincing Cheops that his mother's burial must be transferred from Dahshur to Giza and then actually carried out this bold plan. Anyone who has studied the imperious features of Hemiunu's magnificent seated statue in Hildesheim would not doubt that here was a shrewd, able man who could conceive a great project and who would brook no interference in bringing it to completion. If the conjecture is correct that he had witnessed the disgrace of his predecessor Kanofer, he would be more than wary in protecting himself in the crisis brought about by the robbing of the Dahshur tomb of Hetep-heres.

Hemiunu must have died shortly after the quarry mark of the year 19 was written on the casing of his tomb, for three or four more viziers followed him at the end of the reign. These men all present problems of identification, and one could only be presumed to have held office because of the wealth and power represented by his enormous tomb, G 2000. This mastaba is the largest at Giza, even larger than those of the viziers Ankh-haf and Hemiunu. The white limestone casing had only been commenced. It was intended to cover a facing of small stepped blocks built around the heavy masonry core, as in G 7410–7420. Reisner concluded that this peculiar construction should be dated within a range of the last two years of Cheops and the first five of Chephren. The chapel was destroyed to the foundations and no trace of name or title survived. The disturbed blocking indicated that the burial chamber had been entered in ancient times, but it gave a curious impression of undisturbed emptiness with two sealed pottery jars and some ox bones lying as a food offering in front of a decayed wooden coffin in which the bones of the owner lay outstretched. Dr. Douglas Derry formed the opinion that the skull was that of a very old man of unusual mental capacity. It is likely that he belonged to the generation of Cheops, like Hemiunu and Ankh-haf.

While there is obviously no evidence that the owner of G 2000 was a vizier of Cheops, it is very likely that the man who bore vizier's titles in G 7310–7320 served in this office during the last few years of Cheops's reign. We have seen that he has been given the name Baw-f-ra because of the association of that name with Dedef-hor in the Westcar Papyrus. There is some new evidence, also, that Khufu-khaf became vizier at the very end of the reign. A small fragment of the base of a diorite statuette in Boston bearing his name is evidently part of the broken seated figure of a man bearing the titles of vizier as shown in Fig. 11. This statuette, No. 46 in the Cairo Museum (Borchardt, *Catalogue General*, LIII, *Statuen*, I, 1911, p. 42), was found in 1888 in the Isis Temple, which in late times was built out over the top of Khufu-khaf's mastaba. The two pieces were thus once in close proximity to each other. The new fragment does not actually form a join, but a plaster cast sent to the Cairo Museum was found to correspond very well to the missing corner of the base. In his own chapel Khufu-khaf bears only the title of Chancellor of Lower Egypt, which seems to have formed one of the steps to the vizierate. A large piece of an architrave with the titles of a vizier, found in the queen's boat grave, resembles very much in the style of the cutting and the weathering of the stone other fragments from the chapel of Khufu-khaf's wife (G 7130). It looks very much as though the prince became vizier after he had decorated his own chapel and before the reliefs in his wife's chapel were cut and the statue prepared for his tomb, perhaps in the last year of the reign of Cheops when work was still continuing on his mastaba.

Finally, there is one other man who presents difficulties which have not yet been satisfactorily solved. This is Prince Hor-baf. The burial chamber of G 7420 is the only one not accounted for in which the measurements of the passage and the turning recess at the bottom of the shaft would accommodate his granite sarcophagus, now in the Cairo Museum. A fragment of his name *Ḥr* . . . survived from the chapel wall, but other fragments of a prince's titles come from the northern chapel of this twin-mastaba (G 7410–7420) where there is represented a woman with the title of Princess. The man possessed a Cheops estate and was connected with the service of the Pyramid of Cheops. He had the title 'Great One of the Five of the House of Thoth', which in the Fourth Dynasty is never held by a man who is not a vizier, although it seems to have been dropped in the Fifth Dynasty, when no vizier is known to have this title. It is hard to escape the impression that these two chapels were decorated by the same group of workmen for the Princess Meresankh and her husband Hor-baf. The name of Meresankh was found on a granite sarcophagus in the burial chamber of G 7410, and here she is given the titles of a queen. It looks as though Meresankh married a king as her second husband, but his identification is impossible at present. Reisner favored Dedef-ra as a possibility and also suggested that Hor-baf may have been a son of Meresankh. The name of a daughter, Nebty-tp-itf-s, which Reisner translated 'The crown which is on the brow of her father', is the only scrap of evidence which might suggest that the northern chapel was decorated after Meresankh became queen, but the prominence of the titles of a prince in this chapel and the fact that Meresankh is called 'princess' in the boating scene (Smith, *A History* . . . fig. 63) make it seem more likely that Hor-baf was her husband. If this is so, we should probably have to fit Hor-baf in as another vizier of the end of the reign of Cheops.

There are three other members of the family of Sneferu who should be taken into account in studying the life of Hetep-heres. They are Prince Ankh-haf, his wife Hetep-heres, and the Princess Nefert-kaw, who is called the eldest daughter of Sneferu in the tomb of her son Nefermaat (G 7060) and in that of her grandson Sneferu-khaf (G 7070). Ankh-haf has the second largest tomb at Giza (G 7510), which was built to the east of the first row of twin-mastabas in the Eastern Cemetery, as the first of the additions to this cemetery in the reign of Chephren. He is the eldest son of a king, and his wife was the eldest daughter of a king. In his tomb is represented with him a boy named Ankhetef who is called the son of his daughter. This suggests that Ankh-haf had reached an advanced age when he built his great tomb with its beautifully cut low reliefs and the wonderful portrait bust in red-painted limestone. His wife Hetep-heres, in a broken inscription (see Fig. 10), seems to have held a priesthood of Sneferu, and this combined with her name suggests that she was the oldest daughter of Sneferu and Hetep-heres I and that Ankh-haf was the eldest son of Sneferu and a minor queen. There was no burial place for Hetep-heres in G 7510. It would seem that she had died earlier and was perhaps buried at Dahshur.

Although it has been suggested that Ankh-haf served Cheops as vizier, it now looks as though he were one of the members of the family who, with Min-khaf, Nefert-kaw's son Nefermaat, and the two queens Hetep-heres II and Meresankh II, survived the reign of Dedef-ra to serve the new king Chephren. As a man of advanced years he probably became his first vizier, to be followed in turn by Min-khaf and Nefermaat.

Princess Nefert-kaw has been known as the eldest daughter of Sneferu since the discovery of the tombs of her son and grandson by Lepsius. She was probably buried in G 7050 which lies east of the other two tombs, G 7060 and 7070, but no name or inscriptions were recovered and the burial chamber was completely plundered. She seems to have been the daughter of a minor queen of Sneferu, and there is no evidence that she was ever married to Cheops, although she was probably buried in a mastaba south of the pyramid of his third queen (G I–c). It may be that the lady with the same name, Nefert-kaw, who was the wife of Prince Khufu-khaf, was her child and an older sister of Nefermaat (G 7060). This would strengthen the association with the children of Henutsen, which we have suggested above in proposing that Chephren and Min-khaf might have been younger brothers of Khufu-khaf. Nefermaat's title of prince could have been a courtesy one as is certain in the case of his son Sneferu-khaf (G 7070). Both emphasize their relationship to Sneferu. Nefermaat seems to have served as vizier to Chephren after Ankh-haf and Min-khaf.

To complete the list of viziers of Dynasty IV it might be worth while to examine the sons of Chephren and two men who were probably his grandsons. These viziers served in the last reigns of the dynasty and early in Dynasty V. Prince Duwanera, the son of Chephren and Meresankh III[13] was the owner of the large mastaba G 5110 in the southeast corner of the Western Cemetery. He is probably to be placed as the first vizier of Mycerinus. The owner of the adjoining mastaba (G 5230), Prince Ba-ba-f, was probably the son of Duwanera and can be plausibly placed as a vizier of Shepseskaf. The princes Min-yuwen, Ankhmara, and Nekaura probably followed Duwanera as viziers of Mycerinus. The parentage of Min-yuwen and Ankhmara is uncertain. Both are buried in the Chephren quarry with members of his family and that of Mycerinus. Nekaura dated his will in the twenty-third year of a king

---

[13] Closely associated with his tomb is the mastaba of Khemten (G 5210), who was the family steward of Ka-wab, Hetep-heres, and Meresankh III. Duwanera's name was probably in the broken place in Khemten's inscription as the last mentioned member of the family. His name is partly preserved in the tomb of his brother Nebemakhet (LG 86), where Meresankh III is shown with her children by Chephren.

(*ḥꜣt sp* 12), and since it is likely that he served as vizier at an advanced age, it seems better to assign him to the end of the reign of Mycerinus rather than to the later years of his father Chephren. Finally, one more son of Chephren, Sekhem-ka-ra, had an unusually long life. He tells us he lived into the reign of Sahura, and it seems plausible to follow Weill in making him a vizier of Weserkaf and in the first few years of the reign of Sahura. If Grdseloff is correct in making Weserkaf the son of Princess Nefer-hetep-s, the daughter of Dedef-ra,[14] and if he married Khent-kaw-s, probably a daughter of Mycerinus, there would have been combined in the first king of Dynasty V the two conflicting strains of the Fourth Dynasty royal family. It would have served Weserkaf's purpose very well to employ as vizier an elderly prince, one of the sons of Chephren.

Actually we know very little about the lives of these contemporaries and descendants of Queen Hetep-heres I, except for the often fragmentary hints of their family relationships. Events are barely suggested in the broken pieces of the Old Kingdom Annals or an occasional royal inscription. The writings of Dedef-hor are lost except for a line or two at the beginning of a book of admonitions. On the other hand, religious beliefs are richly illustrated in the Pyramid Texts which were in the process of being formulated during this period. The concept of the continuance of life after death caused the great people of the time and their possessions to be pictured in stone sculpture. The faces of these men and women become strangely familiar to us in the wonderful portrait sculpture of the time, and in the furniture which has miraculously survived in the tomb of Hetep-heres I we have before our eyes the actual furnishings of a palace of the time of Sneferu and Cheops.

Apart from the pleasure to be gained from the beautiful craftsmanship of these pieces, this furniture has an added interest because it belongs to a crucial time in the development of Egyptian art. The artists were reaching a peak of creative ability at the end of the brilliant development of the first three dynasties. The justly famous seated statues of Rahotep and Nofret from Medum represent this culmination in the reign of Sneferu and are followed by the Giza reserve heads, the seated figure of Hemiunu, the bust of Ankh-haf, and the extraordinary royal works in hard stone of the reigns of Dedef-ra, Chephren, and Mycerinus. Reisner brought the exciting implications of this period of accomplishment into sharp relief by picturing Hetep-heres carried forth in her ebony and gold carrying-chair to visit Imhotep's temple complex at the Saqqara Step Pyramid at which men still marveled, and on another day visiting the rocky plateau at Giza which was still nearly bare but where Cheops was beginning his great pyramid. The queen would have been familiar with the two pyramids of her husband Sneferu at Dahshur and that at Medum, which was probably constructed by her father Huni.

The same bold simplicity of execution so perfectly embodied in the sculpture of Dynasty IV is to be found in the shattered paintings in the chapel of Nefermaat's wife Atet at Medum, combined with a masterly use of color and brushwork. This richness of large-scale design is to be seen in the furniture of Hetep-heres but combined with traces of a transitional period best to be detected in the relief sculpture which was in the process of changing from the rather heavy high relief of the reign of Sneferu to the delicate low cutting of the reigns of Cheops and Chephren. There is a complicated use of decorative patterns such as the flower rosettes or the hawk and Neith elements of one armchair. These and the mat patterns worked out in inlay or in the gold framing borders reflect some of the exuberant fertility of invention which characterizes the Third Dynasty architecture of Imhotep. They contrast with the large masses of the papyrus flowers on the first armchair and the gold relief of the seated queen (Fig. 30). The precious incrustation is applied to furniture which is characterized by severe simple lines of a more sober nature.

---

[14] *Annales du Service*, 42 (1943), 64 ff.

II

THE CLEARANCE OF THE SHAFT AND CHAMBER OF G 7000 X

A. THE SHAFT

IT would appear that the first intention was to make a stairway tomb for Queen Hetep-heres I, such as had been the custom in Dynasty III. The stairway was begun in the quarry scarp south of the Cheops causeway. Evidently quarrying operations had ceased here when the rock surface was leveled for the foundations of the First Queen's Pyramid, the project which was abandoned for another site 28 m. to the west when it was decided to prepare a secret tomb for Hetep-heres near this spot. Twelve steps were cut of the stairway, which was open for 3·40 m. and had a width of 55 cm. This was continued as a tunnel in the rock for 95 cm. (whole length 4·35 m.), but at this point a vertical shaft was decided upon and driven down from the surface of the rock, the stairway entering it at a depth of 3 m. The mouth of the shaft lay just south of the edge of the old quarry scarp and had a length of 1·75 m. (N–S) and a width of 2·37 m. (E–W). Grooves for beams were noted at the top of the pit, probably for lowering the sarcophagus, and on the sides of the pit were notches to enable the workmen to climb up and down. The width (E–W) soon narrowed to 1·35–1·55 m. Beneath the irregular paving of local stone, the shaft, like the blocking of the stairway, was laid with courses of small squared blocks of white limestone (see Pls. 1–2; Figs. 12–14).

At a distance of 7·47 m. there was reached the top of a niche in the west wall of the shaft, walled up with a blocking of plastered white masonry. This niche was 2·10 m. high and 1·67 m. deep, but the space inside the blocking had an area of only 92 × 67 cm. (Figs. 14, 15; Pl. 3). When the blocking was removed the recess was found to contain the horned skull and three leg bones of a bull which had been wrapped in a much decayed reed mat, as well as two wine jars (Type A–II b; see Fig. 16). There was also a limestone boulder which Rowe thought had been thrown into the niche for the intentional purpose of ceremonially crushing the skull of the bull 'to release its spirit'. It might be suggested that if this were so one would have expected the jars to have been smashed, too. A piece of metal which adhered to the jawbone of the bull was tentatively identified as silver. There were also two chips of basalt which had accidentally intruded but which seem to indicate that work was continuing on the pavement of the Cheops temple at the time that this offering to his mother's spirit was made by the king. There were also some bits of charcoal. Pieces of burned wood had worked down into the filling of the pit below the entrance to the offering niche. These may have formed the material for censing the offerings with the smoke of fragrant wood.

The laying of the stones was particularly haphazard at a level between 10·60 and 11·60 m., while at 15 m., layers of clean sand were met which alternated with chips and blocks of stone. At the 20-m. level a new section of the pit began with a slightly different alignment, while at 24·80 m. a regularly laid blocking was again reached. This well-laid masonry continued to 25·50 m. where the top of the ceiling of a chamber was observed on the south side of the pit. There was no special blocking of this entrance, which opened directly on the pit, the pit blocking simply being continued to the bottom.

The entrance to the chamber is 1·92 m. high, and the pit contracts at the lower end to 1·14 m. (N–S) × 1·30 m. (E–W). The total depth of the pit was 27·42 m. (see Figs. 19, 21).

In addition to the contents of the offering niche, a few other objects were recovered from the pit. Near the bottom was found an uninscribed mud sealing and at the very bottom several fragments of another sealing inscribed with the name of the mortuary workshop of Cheops (Pl. 43; Fig. 47; No. 1434). In the packing of the pit were found smashed fragments of pottery, these being particularly frequent near the bottom. A few pieces were found in the blocking of the stairway. Some of this pottery consisted of large basins which had been used to hold the plaster of the filling. None of these basins could be reconstructed, but eight other vessels could be put together. These seem to have been from the queen's original chamber at Dahshur and were then overlooked in placing the objects in the new tomb, only to be thrown down into the pit at the last. They consist of four wide basins with spout (one of Type XXXV b, Fig. 72; three of Type D–XXXVI, Figs. 72, 74), a bag-shaped pot (Type A–LI, Fig. 59), a neckless shoulder jar with flat base (Fig. 63), a domed cover (34–4–52, Fig. 78), and a jar stand (Fig. 77), They are included in the list of pottery in Appendix II.

At a depth of 17 m. were found the copper fittings and some small bits of wood, one of which had traces of gilding, which are illustrated on Pl. 3. Several of these pieces were like small fluted columns, but the longest piece only measured 12 cm., with a diameter of 2·5 cm. They could have been the very slender poles of a light canopy, since the Dynasty I examples found by Emery at Saqqara in Tomb 3471 were only 3·3 cm. in diameter.[1] That this may have been the case is suggested by the discovery in the pit of G 7000 X, at a depth between 22·0 and 24·5 m., of eight limestone objects which seem to have been the bases for canopy poles. The circular depression to hold the bottom of the pole is in this case 6 cm. in diameter, but there was a lining of cement in which were impressed traces of wood graining. This would have narrowed the diameter of the hole. Six of these limestone bases are shown on Pl. 3 and a drawing of one in Fig. 17. On the top of each was incised a mark (Fig. 17) which perhaps indicated the position of the piece in setting up the completed object. One thinks of a light structure, like that pictured in the tomb of Hesy-ra in the Third Dynasty,[2] under which the tomb equipment was set on the day of the funeral before being let down the shaft into the burial chamber. It may very well have resembled the large gold-covered bed canopy actually found in the chamber of Hetep-heres. Fragmentary canopies of wood have been found in the store chamber under the southern enclosure wall of the Zoser Pyramid[3] as well as in the First Dynasty Saqqara Tomb 3471 mentioned above.

It might be well to point out that several uses for a light canopy structure are indicated by Egyptian representations. First, there is an actual bed canopy, which evidently carried curtains to enclose a space for the bed of the owner in a house or palace. This is perhaps best represented in the tomb of Queen Meresankh III (G 7530–7540; Smith, *A History* . . . fig. 67), but it appears again at Giza in the tomb of the son of Meresankh III and King Chephren, Prince Nebemakhet (Lepsius, *Denkmäler*, II, pl. 14); and in the Dynasty V Giza rock-cut tomb of Ankhmara (G 7837 in the cliff's edge of the Eastern Cemetery, Expedition Photo No. A 6151). At Saqqara there is a fine example of the Sixth Dynasty (Duell and others, *The Mastaba of Mereruka*, 1938, Oriental Institute Publication, no. XXXI, pl. 93). The gold-covered structure from the burial chamber of Hetep-heres is almost certainly such a bed canopy, particularly since the inlaid box which accompanied it probably contained the curtains with which it was hung. However, although it was probably part of her household furniture during her lifetime, it was large enough to have been set up over the alabaster sarcophagus in her original tomb, and it may well have been used in this fashion. Cecil Firth, in a letter to Reisner, called attention to the fact that such a usage might be imitated in the palace-façade paneling painted on the alabaster slabs that surround on three sides the coffin recess in the burial chamber of Unas, the last king of Dynasty V, at Saqqara. Here certainly is a reflection of the mat hangings of Hesy-ra's tent. Here also is a warning against an attempt to separate too precisely into their component parts Egyptian customs which had been inextricably mingled.

---

[1] W. B. Emery, *Great Tombs of the First Dynasty*, I, *Excavations at Saqqara*, Service des Antiquités de l'Égypte (1949), p. 58, fig. 30.

[2] J. E. Quibell, *The Tomb of Hesy*, *Excavations at Saqqara, 1911–1912* (1913), Service des Antiquités de l'Égypte, pls. XXII–XXIII.

[3] C. M. Firth and J. E. Quibell, *The Step Pyramid*, *Excavations at Saqqara* (1935), p. 62 and pl. 37.

The structure just mentioned as being represented in the Third Dynasty tomb of Hesy-ra shows a sort of tent with hangings of colored matting stretched on a frame supported by poles. In this the tomb equipment is set out. This may well be the *sḥ*, or tent, often mentioned in funerary inscriptions. The custom of setting out food offerings in such a tent in connection with a banquet is often represented later, one of the finest examples being in the Dynasty V tomb of Iyemery at Giza (G 6020; Lepsius, *Denkmäler*, II, pl. 52). Quibell, however, in publishing the Hesy-ra paintings, called attention to a resemblance between this tent of the Third Dynasty and a Sixth Dynasty example in the tomb of Pepy-ankh at Meir where it was called the *ibw* (B. Grdseloff, *Das ägyptische Reinigungszelt*, 1941, p. 11, fig. 4; Smith, *loc. cit.*, pp. 104, 140, 206, 221, 319, 349). Grdseloff sees in this latter, however, a structure which was set up for the ceremony of purifying the embalmed body of the dead man. This would, then, be a third use for the tent-pole canopy with hangings.

I suspect that the fragments found in the shaft of Hetep-heres belonged to a structure which either served as the 'purification tent' (probably at her original tomb at Dahshur) or else contained the equipment before it was placed in the tomb. The Zoser canopy may well have had a similar use, since it was placed with a hand barrow and a large box in the store chamber of the 'Southern Tomb'. The First Dynasty example found by Emery, on the other hand, lay with a bed in one of the storerooms of Tomb 3471 and was probably a bed canopy.

Finally, before leaving the subject of the shaft, it should be noted that a number of the limestone blocks of the filling bore marks on them. These bear a resemblance to other builders' and quarry marks that are known, but contribute little to the understanding of their purpose. They are drawn on Fig. 18. Amongst these worked blocks there were about a dozen which seemed originally to have formed part of the lid of a limestone sarcophagus.

B. THE CHAMBER

The burial chamber of Hetep-heres extended 5·22 m. to the south of the shaft and had a width varying from 2·67 to 2·77 m. It was somewhat irregularly cut and has a present height of 1·95 m. Obviously, it was once intended to make the room larger in area and greater in height. Just inside the entrance, in the northwest corner, is a pit in the floor, 1·21 m. deep and 1·40 m. (N–S) × 1·60 m. (E–W). This pit had been filled in with rubble and dust which had been raked over the area until it rested some 50 cm. above the floor in the northwest corner of the entrance wall. This filling had subsided a few centimeters near the northwest corner of the coffin, leaving an irregular surface to the floor at this point and the edge of the pit clearly evident. This settlement had probably caused the collapse of one of the armchairs, two legs of which rested on the filling (see Figs. 19, 21, 22; Pls. 4, 43).

Thus a full height of 3·16 m. for the room was probably planned, and this would have given ample clearance to set up the bed canopy, which has a height of 2·21 m. A cutting in the east wall, above the sarcophagus, runs in 2·60 m. from the entrance and extends down from the ceiling 95 cm. It has a depth of 40 cm. into the rock. It had been partially filled with blocks of stone when it was decided to use the chamber in its present state. A similar cutting in the west wall extends in 2·76 m. from the edge of the shaft and 75 cm. down from the ceiling. It was somewhat irregular in depth but 2·40 m. at its greatest extent of cutting into the rock. This was carefully blocked up with masonry set in plaster and contained the queen's canopic chest (see Pl. 44; Fig. 22).

The alabaster sarcophagus stood against the east wall, a meter inside the entrance to the chamber and with a space of 30 cm. between coffin and wall. It measured 2 m. × 85 cm. and stood 80 cm. high. The lid showed on the outside a thickness of 5 cm., but it fitted into a rebate in the top of the box, 6 cm. wide on the rim with a ledge 5 cm. wide and 4 cm. deep. The total thickness of the box was, therefore, 11 cm. and that of the lid 9 cm. (Fig. 21; Pl. 4). The ends of the lid each had two projecting hand grips. The coffin rested on a flooring of decayed wooden boards. On the bottom of the coffin were three wedge-shaped marks (Pl. 43) cut in the alabaster. It was immediately noticed when the chamber was opened that a metal tool had been used across the upper edge of the box to pry off the lid (Pl. 4), and later that such chipping of the upper edge of the box occurred along the side facing the wall. In one of the cases which had contained linen at the south end of the tomb was found an alabaster chip from the upper edge of the box which suggested that this chip had been picked up from the floor with the rest of the disturbed contents of the original tomb and transported to the new burial place. More chips were later found in the debris of other cases along the south wall. There was, then, from the first, evidence that the contents of the coffin had been tampered with. Actually, the body had been removed; when the lid was finally lifted at the end of the clearance of the tomb, the box was found to contain nothing.

The dismantled parts of the gold-cased wooden bed canopy had partly been placed on top of the sarcophagus and partly between the coffin and the east wall. The ends of these pieces rested on the boxes south of the sarcophagus, and with the decay of the wood the gold casings fell down upon the pottery in that area (Figs. 19, 20, 23–27; Pls. 4–10). Along the western edge of the coffin lid had stood the inlaid curtain box (Figs. 28, 29) which collapsed in place, one end falling over the southwest corner of the coffin. A few inlays also lay along the west face of the coffin (Pls. 7, 11–13). Dr. Reisner formed the impression (particularly from the damage to the side of the coffin facing the wall) that the contents of the tomb were placed in their new positions in reverse order from that in which they had stood in the original tomb. In other words, the coffin had been placed in the far corner of the original tomb, and at the time of burial the furniture and boxes of linen and pottery were then set around it. One can only speculate as to whether the canopy was set up in position around the sarcophagus in the larger original chamber or whether the bed stood inside it with the curtains hanging in place.

The space just inside the entrance, north of the coffin and including the area of the unfinished cutting in the floor, had not contained any objects (Fig. 20; Pl. 14), but some 35 cm. south of the northwest corner of the sarcophagus there stood a gold-cased armchair with its back to the coffin and the front and back legs of its north side resting on the filling of the floor pit. Partly through the settlement of the rubble in the pit and partly from the blow which the chair received when the box south of it collapsed, the parts of this chair fell to the floor in a general northerly direction, but more or less in their original positions (Pls. 14–16).

The four gold-cased lion legs of the chair collapsed on the floor close to their original positions, and the twined papyrus flowers forming the openwork decorations of the arm supports fell over to the right retaining quite clearly their original pattern. The wood had almost completely decayed, but the gold frames of the seat and back panel indicated plainly the size and construction of the original parts (Pls. 15, 16; Fig. 31). Mixed with these were the fragments of gold leaf forming a figure of the queen, seated on a throne and smelling a lotus flower (Pl. 14; Fig. 30). These do not seem to provide a very appropriate design, particularly in the size and proportions of the preserved parts, for the back of the chair which has been restored as a plain wooden panel. It may be that the gold-leaf figure of the queen formed the decoration of the lid of a small box which had been placed on the floor underneath the chair. Conventional though the representation may be here, it is the only picture which we have of the queen, save for the tiny gold hieroglyphs which determine her name on the carrying-chair (Pls. 28, 29) or the little inlaid figure in the inscription on top of the large box (Fig. 40; Pl. 35). Although the figure is only 28 cm. high and worked in very thin gold sheeting, it conveys an impression of large-scale design and modeling which is in keeping with the boldly conceived high reliefs of the reign of Sneferu which have been preserved in a few examples such as the chapel of Methen and Tomb 3078 at Saqqara, the cased niches of Iyenefer at Dahshur, and the reliefs of Rahotep at Medum.[4] The same bold treatment of simple masses is again seen in the papyrus flowers of the gold-cased armchair. It should be noted that the queen is wearing large bracelets, graduated in size to fit the arm, like the inlaid silver ones actually found in the tomb (Pl. 38). They are worn again by Rahotep's wife, Nofret, and by the wife of Prince Khufu-khaf in the reliefs of the Giza tomb G 7140.[5]

Beside the first armchair, but facing the entrance, stood a second chair with even more elaborate decoration, this time worked out in colored inlays (Figs. 20, 32; Pls. 17–24). Beyond this to the south and parallel to the west wall, the queen's bed had been dismantled and laid down with one end resting on a box of pottery. This box must have stood about 60 cm. high, judging from the size of the great pottery basins which it contained. The bed was upside down and turned around so that its short legs at the foot end were toward the south, while the longer legs at the head end stood up in the air just behind the inlaid armchair (Figs. 19, 20, 33; Pls. 25, 26).

The footboard of the bed was decorated with a design of floral rosettes alternating with a feather pattern in blue and black faïence inlays. It had been removed from the copper sockets in which the two projecting tangs on its base were designed to rest and had evidently been placed leaning against the head bar of the bed, which rested on the floor. On the sloping surface of the wooden planks of the bed, which presented their under surface to view, and between the bed legs, which rose up in the air, had been set the considerably narrower carrying-chair (Figs. 19, 20, 34; Pls. 27–31). It lay at a pronounced angle with the gold-cased palm capitals of its rear poles resting on the ground. The back of the seat of the carrying-chair, with its ebony strips inlaid with gold hieroglyphs giving the queen's name and titles, thus jutted out in the direction of the back of the second armchair.

Standing vertically and leaning against the back of the carrying-chair was an object which we have somewhat hesitantly suggested to be a tall leather case with a caplike lid (Figs. 20, 46). The top and bottom of it consisted of thin round sheets of wood cased on both sides with thin gold. The upper two sheets forming the casing of the lid were composed of darker, more brittle metal which may have contained a proportion of silver. They were, therefore, probably electrum. The upper surface of the lid was inscribed: *mwt nśwt bỉty* . . . *Ḥr* . . . *Ḥtp*-[*ḥrś*], and thus seems to have contained the names and titles of Hetep-heres as mother of the King of Upper and Lower Egypt. Of the leather, only a small fragment was preserved, and this contained part of an inlaid design containing the emblem of the god Min which evidently ran around the side of the cap. This pattern, divided at intervals by three vertical strips of inlay, was also found under the end bar of the bed and in the neighborhood of the inlaid box to the east of it. The pattern differs from that on the lid of this inlaid box (Fig. 40) in having the separating vertical strips. It was found associated with strips of wood having an oval section, 2·5 cm. wide by 0·08 cm. thick, and was identified from the start as being a wooden staff decorated on two sides with the Min elements.

---

[4] Smith, *A History* . . . pp. 148–156. Through an unfortunate error in the second edition, the number of the Saqqara tomb is given as 3080 instead of 3078 in one place on p. 149.

[5] Smith, *loc. cit.*, pls. 33, 34, 43.

Fallen parallel with the east side of the bed were two gold rilled staves. Their various elements of gold sheeting graduated in size down from a large gold knob at the top and were found to give a length of 1·03 m. for each staff (Fig. 46; Pl. 33). There were enough Min inlays which actually showed evidence of having been inlaid into the wooden staff to give a length of 80 cm. The remaining portion of the 1·03 m., if this staff was as long as the gold staves, could have been decorated with a number of unassigned Min elements which were left over after the requisite number had been restored to the similar design on the box lid.

It would seem then possible to restore a leather case containing these three staves. The more rapid decay of the leather apparently allowed the staves to fall out, the two gold ones sliding down to the east and the inlaid wooden one falling to the west. The two silver or electrum sheets from the cover eventually fell down on top of the bright gold sheets of the bottom of the case, in an area just south of the easternmost palm capital of the carrying-chair pole (Pls. 32, 33; Figs. 19, 20), and just to the west of the bed leg and papyrus flower of the end of its side bar.

Along the west face of the coffin, extending from the south side of the armchair to the southwest corner of the coffin and in the space between the coffin and the east side of the bed, stood a long gold-encased box with an inlaid lid decorated with a design in narrow horizontal registers (Figs. 20, 38–40; Pl. 35). The design consisted of, first, a line of cartouche-like *šn* signs separated by vertical inlays; then two long bands of flower rosettes separated by feather pattern as on the footboard of the bed. Below this was an inscription giving the name and titles of Hetep-heres, banded above and below with Min elements. Underneath was again a row of flower rosettes, with Min patterns at the bottom. The whole was framed with thin gold strips worked into a mat pattern (Fig. 40).

This lid collapsed over the contents of the box and slid over in the direction of the bed footboard panel and the inlays of the second armchair. There was thus produced a deposit containing several layers of inlays from different objects (including those from the wooden staff). Obviously the recovery of these designs provided a most difficult problem which was solved in the tomb itself after a long and trying period of tiring effort. Subsequent study has made it possible to assign the correct elements to their original places. It is believed that the drawings in this volume offer a final solution to the puzzle. The order of restoration consisted, first, in establishing the designs which covered the footboard of the bed (Pl. 25), which were fortunately isolated, then the parts which belonged to the second armchair (Fig. 32), third, those which formed the lid of the box (Fig. 40), and finally, the inlays from the wooden staff and the cap of the leather case (Fig. 46).

From this tangle of inlays had also to be extricated the tiny gold hieroglyphs which were let into the ebony panels of the back of the seat of the carrying-chair (Pls. 28, 29). When this back panel fell toward the north, it seems to have struck the decaying back and arms of the second armchair which swung about and came to rest, the left arm against the west wall of the tomb and the right arm lying diagonally across the floor (Figs. 19, 20; Pl. 17). The inlaid parts of these armrests had framing bands of flower elements and feather pattern and contained an openwork design of a Horus hawk with outstretched wings standing on a palm column (Fig. 32; Pls. 18, 19). The hawks and palm columns were covered with gold sheet and inlays on both the inner and outer faces. The back panel of the chair was inlaid on both sides and, as it twisted around, fell with its back face uppermost. This back face had three projecting vertical wooden strips and a horizontal top border inlaid with flower rosettes and feather pattern.

These framed two emblems of the Goddess Neith consisting of standards bearing her symbols of shields and crossed arrows. These were modeled in raised plaster covered with gold and set in a background imitating matting composed of zigzag inlays of blue-green faïence (Pls. 22, 23).

The front of the chair back had a similar design bordered by flower and feather strips. However, in this case the Neith standards were made of colored faïence inlays let into a background of gold sheeting (Pls. 20, 21). The tops of the chair arms were covered with gold sheeting worked into a mat pattern (Pls. 17, 24). The gold-cased chair legs, with their copper bases beaten into graduated concentric rings, were similar to those of the first armchair but composed of thinner gold sheeting which had torn badly. It has not yet been possible to identify certainly the gold from the frame of the chair seat.

In discussing the inlaid material from the Hetep-heres tomb in my *History of Egyptian Sculpture and Painting in the Old Kingdom*, pp. 145 ff., I have pointed out that there is very little comparative material except for the inlaid wooden ceremonial vessels from the pyramid temple of Neferirkara (L. Borchardt, *Das Grabdenkmal des Königs Nefer-ỉr-ke-reʿ*, 1909, pls. 3–8). There the rectangular strips of feather pattern with their rounded ends appear combined with the more usual scale-shaped feather patterns. Both of these patterns appear in a more naturalistic usage on the bodies of the Horus hawks on the arms of the inlaid Hetep-heres chair. On the Neferirkara vases the Min emblems are also used, in this case separated by the *šn* signs. Something similar may have been applied to an inlaid wooden vase from the temple of Mycerinus, of which only a small fragment was recovered (Reisner, *Mycerinus*, 1931, pl. 65). The flower patterns, of course, constitute one of the basic elements in Egyptian decorative design, while the use of the Neith emblem is familiar from Early Dynastic objects. Some of these designs will have to be considered further in the chapters which deal with the furniture in more detail. One should perhaps remark here that the inlaid butterflies of the silver bracelets are unusual and that the flower patterns are elaborated in Old Kingdom crowns and headbands, as well as on thrones and on the sail of a ship (L. Borchardt, *Das Grabdenkmal des Königs Śaꜣḥu-reʿ*, II, 1913, pls. 16, 44, 9). Coupled with the frequent use of mat patterns imitated in gold or faïence inlay, these designs remind us of the ingenuity in ornamentation of the craftsmen who fashioned the buildings of the Step Pyramid complex for Zoser in the Third Dynasty. They continue directly in the tradition of the marvelous but sadly smashed furniture from the First Dynasty tombs at Abydos. The furniture-makers of the time of Sneferu and Cheops were clearly following traditions established in Dynasty I and seem logically to belong in a period shortly after Zoser's time.

To return to the box with the inlaid lid and its contents, the size of this box can be determined by a number of different factors described in Chapter V. The wooden floor board was traced beneath all the objects which stood south of the first armchair (Figs. 19, 20). The various elements of the inlaid lid had fallen down over these objects and the rilled gold sheeting which covered the box was recovered from this area. Like the second armchair, this box is one of the most richly decorated objects in the tomb and must have been one of the queen's precious possessions (Figs. 38–40; Pls. 33, 35). The varied nature of its contents seems to suggest that these were not intended originally to be placed in it but were gathered up more or less at random in the plundered tomb for transportation to Giza. The gold and copper razors and small toilet articles (Fig. 45), for instance, were probably originally in a flat box of their own as they are shown on the painted wall in Hesy-ra's tomb. A small gold spouted cup which appears to have formed part of an original set with the two little gold saucers found here (Pl. 40 b) had actually been placed with the pottery and stone vessels of a big box in the southern area of the tomb. The razors and other toilet articles were hastily pushed into a corner of the box beside the gold-covered case which contained the queen's silver bracelets (Pl. 40 d; Fig. 38). That they were loose is indicated by the fact that in transportation one of the rectangular copper razors was shaken out of place and fell into the copper basin, where it eventually worked under the ewer and was found stuck fast to the bottom of it.

Beside the bracelet box, on the north, stood the gold-covered headrest, and next to it a large pottery jar (34–4–8; Fig. 58, 1/1) was placed leaning against the side of the box and forced against the ewer and basin which stood in the northwest corner of the outer case (Fig. 38). On top of the ewer stood a small wooden box which contained a set of alabaster ointment vessels. When the outer case decayed, this fell over, spilling the little jars on the floor, the weight probably contributing much to the collapse of the chair with the papyrus arms which stood alongside (Fig. 19; Pls. 14, 15, 34).

Inside the large box with the inlaid lid were also several other objects, including a bead garment, which will be described in Chapter V. The box rested unevenly on a fragment of limestone. While the north end and west side of the box were flush with the floor, the southeast corner was slightly raised. With the general settlement of the objects as the wood decayed, the gold-covered bracelet box gradually slid down to the west. The pointed base of the pottery jar gradually pushed under the bottom of the bracelet box and finally came to rest on its side (Pl. 37). The headrest was pushed around to the west and toppled over (Pl. 39). A small red pottery bowl with an ointment jar inside it fell out of an alabaster dish and through the floor boards of the case (Pl. 39). It was forced around to come to rest on its side under the western edge of the gold sheet of the bottom of the bracelet box. The ewer and basin fell over to the north, tipping over the box of ointment vessels which fell down on the floor very close to the place in which they had originally stood upright (Pl. 34).

The area under the bed was virtually free of objects. However, an alabaster bowl had evidently rolled out of the decaying box of pottery and stone vessels upon which rested the southern end of the bed (Figs. 19, 20; Pl. 32). From this same box seem to have come a number of little mud pellets fashioned into tiny model jars and two small bone tools (Fig. 35). In the middle of the area under the bed were three heavy copper tools which had evidently been dropped by the workmen (Figs. 19, 36; Pl. 30). Finally, there were two unidentified strips of heavy gold (upper part of Pl. 32).

On the floor against the south wall of the tomb had been placed a row of four boxes of various sizes containing linen (Figs. 19, 20).[6] In the area south of the bed it was possible to trace out, not only the outlines of a box on the floor, but two layers of decayed linen separated by two layers of decayed wood (Figs. 19, 20; Pl. 31). These clearly indicated that a large box, about 90 × 59 cm., supported a second, smaller box with an area of about 58 × 43 cm. These boxes seem to have been about 40 cm. high. Next to them stood three more boxes placed endwise to the south wall. The first of these to the east measured about 50 × 70 cm., the second 60 × 90 cm., and the third 40 × 120 cm. (Fig. 20). The pottery found amongst the decayed linen seems to have been standing on top of the boxes and not contained in an upper layer of boxes, as is indicated in the restored drawing on Fig. 20. Pottery seems also to have been packed into the rather wide space between the second and third boxes. Beginning in the second box was found the first of a number of broken box and jar mud sealings (Fig. 47), inscribed with the name of the mortuary workshop of Cheops. These had evidently been broken off the objects in the deposit in the original tomb. Here also were found the fragments of alabaster chipped from the coffin and a number of flint blades (Pl. 41) which were mixed with the broken pottery in the area south of the sarcophagus and seem to have been gathered up from the debris of the original burial deposit. There were twenty-two flints in all, thirteen with rounded ends and nine of a smaller rectangular shape. Amongst the pottery on top of the second box lay a sandstone rubbing stone.

---

[6] Specimens of the cloth from these boxes were examined for Mr. Lucas by Dr. A. C. Thysen and Mr. H. J. Bunker of the Bacteriological Laboratory of the Royal Naval Cordite Factory, Holton Heath, Dorset, England. They found that the definition of the fiber particles was insufficient for the cause of deterioration to be diagnosed; however, it was possible to detect spores of fungus. Their report goes on to state: 'The existence of fungi in the fabrics investigated has thus been made highly probable. Nevertheless, it would be incautious to attribute to this agency more than a purely temporary and superficial action on the fabrics on which they were found.' As for the wood in the Hetep-heres tomb which it had been thought was attacked by a fungus growth, their report states: 'A microscopic examination of the silvery covering of the sample of wood . . . established beyond doubt that it could not be a layer of *fungus mycelium*. It was found to be a plaster mould or impression of the wood on which it lay. . . . The more woolly portion of the surface covering of the wood, which to the naked eye resembled a *fungus mycelium* was found on microscopical examination to consist solely of needles of an inorganic nature, probably of calcium sulphate interspersed between the wood cells.'

In the center of the southern area stood two more superimposed boxes of pottery. In the upper of the two were a good many stone vessels and the little spouted gold cup (Pl. 40 b). On the lid of this box lay two groups of badly decomposed tools, four in one group and six in the other (Figs. 20, 37). In decaying these had formed a large mass of bright green material (hydrated copper carbonate, being in fact the same substance as malachite according to Mr. Lucas). The two boxes seem both to have measured about 70 × 60 cm., and each was perhaps 40 cm. high, like the linen boxes against the south wall, although this can be little more than a guess.

Between these boxes and the coffin stood two more superimposed boxes measuring about 100 × 55 cm. These contained pottery. Here we can be fairly certain that their total height was about 80 cm., since the ends of the bed-canopy beams and poles rested upon the lid of the upper box. The bed-canopy parts extended out southward from the lid of the sarcophagus which was at a height of 85 cm. (Fig. 20). In the rectangular space left by the boxes and the east side of the bed lay a round basket with a lid of undetermined height which Reisner states contained plaster and was left lying there by the workmen (Fig. 20; Pl. 42). There seems an alternate possibility that it might have contained a group of alabaster vessels which were lying in this area (Pls. 30, 42), although these may have fallen out of the upper box immediately to the south of this basket.

It should finally be stated that the boxes in the center of the room, as well as the one which lay against the east wall, contained plaster which Reisner identified as being from the blocking of the doorway into the chamber of the Dahshur tomb. One of these pieces which he sketched in the register of objects from G 7000 X was stated to bear the impression of the juncture between the roof of a vaulted sloping passage and the doorway into the chamber. Reisner considered this a very important indication of the nature of the original tomb. It must be confessed that no amount of work over these pieces by Dows Dunham and the writer could be brought to a satisfactory result in confirming this suggestion. It should also be remarked that although sloping passages were employed in the transitional tombs of the reign of Sneferu, as well as in the Queens' pyramids at Giza, these were in no case cut with a roof rounded or vaulted in section. Neither the width, height, nor angle of this passage can be determined from the plaster fragments. Although they may well have filled the interstices between the squared blocking stones of the entrance to the original chamber, it does not seem that they can be made to produce any very satisfactory evidence in regard to its size or shape.

There remains to be considered, in this general survey of the contents of the tomb, the recess in the west wall which contained the alabaster canopic chest of Queen Hetep-heres I. The canopic chest was set well back in this recess which had been completely sealed by a masonry blocking set in plaster (Pl. 44; Fig. 22). It rested on a small wooden sledge (or stretchers). The runners of this could be made out but it was too badly decayed to be recovered. The alabaster chest was 48·2 cm. square and 35 cm. high. The walls were 3·5 cm. thick and the lid 2·8 cm. thick. The lid had two small projecting ledge handles and rested flat on the box without any rebate. Inside, the box was divided into four compartments by narrow walls and one dry compartment was 26·2 cm. deep. This dry compartment contained a mass of decayed organic matter, but amazingly enough, the other three compartments retained about 5 cm. of yellowish liquid which was found by Lucas to consist of a 3 per cent solution of natron in water. In this lay the remains of the canopic packages which contained the entrails of the queen; all that has survived of the mortal remains of the mother of Cheops. In the center of the lid was a mud seal which had fastened a string that had run around the box. The seal was protected by a small perforated pottery lid (34–4–42; Fig. 78). Unfortunately the surface of the mud was badly decayed, but, as on the other sealings from the tomb, there must have been mention here of the mortuary workshop of Cheops which had prepared his mother's body for burial.

III

THE BED CANOPY AND CURTAIN BOX

THE bed canopy and its method of construction were described in detail by Dr. Reisner in the *Bulletin of the Museum of Fine Arts*, 30 (1932), 56 ff. There is little to add to this discussion, which is largely repeated here with the addition of the detailed drawings of the fittings which were mostly made by Bernard Rice, who undertook the final reconstruction of the piece for the Cairo Museum. One or two small points were elucidated when Joseph Gerte prepared the copy which is now exhibited in the Museum of Fine Arts in Boston. A small working model was first made by Dows Dunham. W. A. Stewart began preparing the woodwork and made a first set of working drawings, later somewhat modified by Mr. Rice. The final work of reconstruction began in September 1930, and was completed in February 1932.

The length of the whole canopy is 3·20 meters, the width 2·50 meters, and the height 2·20 meters (Pl. 5). Hooks were fastened around the top of the frame at intervals on all four sides, evidently for hanging curtains on the inside of the canopy. Apparently, a roofing cloth was also fastened to these hooks. There was also a hook at each end of the roof poles to secure them by ties to a series of staples which ran along the top of the front and back roofing beam. On the outside of each of the three floor beams was also a second series of copper staples. It does not seem possible, as Reisner thought, that these staples on the outside of the floor beams could have been used to fasten the side curtains, but their use is obscure.

No trace of the curtains was found in the inlaid box which was evidently intended to contain them. They may have been torn down by the thieves in the original tomb and then stuffed into one of the boxes of linen which were found stacked against the back wall of G 7000 X, when the objects were transferred. The whole canopy must have formed a curtained space where the queen's bed and perhaps other furniture could be placed, partly for the sake of privacy and partly for protection against insects. With its copper fittings and thong ties, it could be taken down quickly and set up again in a different place.

The wood had entirely decayed and the copper parts were not strong enough to be employed in the reconstruction, but the gold casing was well preserved, except for a few ancient tears. The base of the floor beams was sheathed in copper, as were all the practical bearing points throughout the canopy where a tenon and a socket came together. The edge of this copper sheathing was bent back and fastened to the wood by small copper tacks driven through the edge of the gold casing. Otherwise, the whole surface of the canopy was covered with a casing of fairly heavy gold, worked largely in imitation of mat patterns, except for the smooth surface of the canopy poles and the inner sides of the door frame, which had inscriptions in relief giving the titles and name of the queen's husband, Sneferu.

Above the entrance, the architrave was formed by an L-shaped piece of wood with a slender horizontal pole attached below in the typical fashion of 'drum' and architrave so often found in Old Kingdom architecture. A monumental example of such a form appears cut in the rock in the upper chamber of the Mycerinus Pyramid (first photographed in L. Grinsell, *Egyptian Pyramids*, 1947, pl. VIII). An unusually thick strip of gold was nailed with gold tacks around the edge of the socket in the upper part of the inscribed jamb where it received the copper-sheathed end of the architrave. Details of this joining can be seen in Pl. 9 a, b and Fig. 23 a, b. The drawing in Fig. 23 c shows the socket in the front end of the left-side roofing beam (as seen from the front of canopy) which fitted down over the tenon which projects up from the top of the door jamb panel.

Figure 24 shows the copper-sheathed parts which form the joining between the right door jamb and the floor beam. In all these cases the same details are duplicated on the opposite side of the canopy. Here (Pl. 9 d) a copper-sheathed tenon projects down from the jamb and fits into a copper-cased socket in the floor beam. Fig. 25 and Pl. 10 b, c show the somewhat more complicated joining of the upright posts at the back corners, the right corner (as seen from the front of the canopy) being chosen for illustration. Here the floor beams (and roof beams) are joined to each other by a system of sockets and tenons. A similar join is made between the two corner posts and the roof and floor beams. However, the corner posts themselves, when fitted together at right angles, are fastened by three copper bolts, spaced at the top, middle, and lower part of the uprights. These have beetle-shaped ends which show on the side to the front of the canopy.

The corner posts are completely covered with gold, even on the faces which are fitted against one another. The flat copper bolt had a long slot in it (as appears in the three drawings in the upper left corner of Fig. 25). In the forward post the end of the slot was held by a copper pin countersunk in the wood, since the small beetle-shaped end would probably not have been strong enough to hold, being largely ornamental. The bolt passed through both uprights and protruded behind the back post. A copper pin was driven through the slot here. The gold-cased wood was protected by a copper washer which slipped on over the end of the bolt and rested under the pin.

Pairs of heavy copper staples were driven in, facing each other, at all the joints between floor beams, roof beams, and uprights so that they could be secured by fastenings probably made of rawhide. Wherever the staples were driven in, the gold was first cut away and then repaired with a small piece of gold sheet. These staples can be particularly well seen in Pl. 10 b, c, and the thong ties appear in the view of the whole canopy on Pl. 5.

The side poles and roofing poles were gold tubes laid over the wood and were made by rolling a single long sheet of gold. The upper part of the ten bulbous-headed tent poles was made of a separate piece of gold sheet and nailed to the lower half by tiny gold tacks which passed through both overlapping sheets of gold and into the wood. The tenon at the top of the poles was sheathed with copper and a copper ferrule fitted around the bottom of each pole. These formed bearing surfaces when the pole was slipped into the copper sockets of the floor and roof beams (Pl. 9 c, f; Fig. 26). The ends of the five roofing poles were cut into dovetailed tenons which were similarly covered with copper and fitted into copper sockets in the roof beams, as is shown in Fig. 26 and Pl. 9 e.

Plate 10 a shows two of the copper sockets to take the top of the tent poles (at each end of the upper row in the photograph). In the lower row (placed upside down in the photograph) are seven of the copper sockets for the base of the poles. In the middle and upper rows of Pl. 10 a are some of the other copper fittings. It will be noticed that these have been soldered together with a bright metal. When these were cleaned by Mr. Lucas, it was discovered that this solder was of silver (A. Lucas, *Ancient Egyptian Materials and Industries*, 2nd ed., 1934, p. 173; 3rd ed., 1948, p. 248).

The wood was evidently first carved with the matting patterns and the hieroglyphic inscriptions in relief and then the long sheets of gold were laid down over the wood and beaten until the surface of the gold assumed the raised shapes underneath. In general, the gold was composed of a single sheet, but in two cases there were two sheets overlapping at the edges. One of the roofing poles had been broken and was mended by a sheathing of copper tacked over the break. The gold of the long floor beam at the back was made of thinner sheeting which was worn and appears to have been pieced together. The details in the decoration were tooled with a sharp instrument after the general outlines had been beaten out over the carved wood surface. Mr. Gerte believed that although the vertical lines of the matting patterns were carved in the wood, the three thin cross lines of the pattern were cut in a punch which was then used to stamp the design into the gold. The outlines and all the inner drawing lines of the hieroglyphs were certainly added with a sharp tool.

The inscriptions on the two jambs are the same, although the drawing of the individual hieroglyphs varies somewhat. The drawing and execution of the right-hand panel (reproduced in detail on Pl. 8) is more careful than that on the left. The vertical inscription is enclosed in a large cartouche. Above each of the three sections hovers the Horus hawk with the *šn* sign in its claws. The inscription reads: 'The Horus Neb-maat, the Great God, endowed with life, endurance and power, (2) the King of Upper and Lower Egypt, Lord of the two Crowns (*nbty*) Neb-maat, the Golden Horus Sneferu, Lord of the *Ḥpt*, (3) the Golden Horus, Foremost of the Places of the God, forever.'

In the debris beneath the inscribed panels were found five little scraps of plaster with the impression of a part of the Golden Horus name above the cartouche of Sneferu on the right-hand panel. A sixth plaster fragment may contain part of the *nb* sign from below the cartouche. These are drawn on Fig. 27. It will be seen that they can only be an impression of this particular part of the canopy, since the necklace upon which the hawk stands is drawn somewhat differently on the left-hand panel. The representation is in reverse, and the plaster must, therefore, have been pressed against the outer surface of the jamb. It may be that the workmen accidentally spilled plaster on the panel during the movement of the furniture to Giza or even in sealing up the original tomb. This plaster was then shaken off when the wood of the panel decayed, and the gold settled on the floor behind the sarcophagus.

In concluding this description of the bed canopy, I should like to quote from the report which W. A. Stewart made when preparing the drawings of the copper fittings illustrated in Fig. 26.

> All the joints of the canopy are sheathed in copper which had been beaten from a sheet and cleverly worked around the shapes of the tenons and mortises, etc., and fixed in position with copper nails after the gold had been applied to the wood.
>
> Some of the joints were very complicated and the skill in beating sheet copper to fit these shows a very high order of craftsmanship. The ferrules and sockets at the bottom of the upright poles have been made with an overlap joint beaten to the thickness of the original sheet metal—rather less than 1 mm.—and brazed with silver solder, traces of which were evident when the pieces had been freed from corrosion. The flanges, as seen on No. 1386 in the detailed drawing, were evenly beaten over and showed no trace of cracking such as would have happened with unskilled work by a craftsman who did not fully understand the behaviour of copper under the hammer and the constant need of annealing.
>
> Where the joints were such a form that they could not be completed and then slipped on to the wood—as in the case of the dovetailed tenons (No. 1450 in the drawing) on the ends of the roof poles—they were completed on the wood itself and the overlap joint fixed down with copper nails as shown.
>
> This dovetail is illustrated in its flat development to show how the form was achieved. Narrow edges were left on the end piece A and were beaten over the tenon at a right angle to close the joint when the sides B, B were turned up into position. The overlap C–C was then hammered over the rounded top and the full size of the circular rim D was developed by beating the bottom E and the sides B, B to spread the copper to the required size.
>
> The overlap was left open until the copper was fitted on the wood, and was then fitted with copper nails after the end A had been fixed.
>
> An equally interesting piece of construction is shown in the socket to receive this dovetail, No. 1309. The side flanges were cut wider at the corners and allowed to wrap over the end of the flanges as shown in the diagram of the flat sheet where the dotted lines indicate the bends in the metal.
>
> The exactness with which these metal pieces were made to fit the joints of the wood and each other—there is only a working space of the thickness of a thin sheet of paper between the joints—shows a craftsmanship which is truly remarkable.

Another inscription giving the titles and name of Sneferu was found on the top and sides of the curtain box, which lay beside the canopy poles on top of the alabaster sarcophagus. The designs and inscriptions of this box were carved into the wood and then filled with colored faïence inlays. Very thin sheets of gold leaf were laid down over the surface to form the background, and the designs were cut out of this gold. The edges of the gold were pressed into the depressions around the edge of the designs before the inlays were inserted.

The boards of this box had subsided gently on top of one another on the upper surface of the sarcophagus. The outer side and the end which faced toward the entrance of the chamber had fallen face down. The lid fell face up on top of these, and finally, the inner side fell face up covering a portion of the lid. The wood had almost completely decayed but the gold and inlays remained in position, almost completely undisturbed. However, the upper feather pattern border of the east face fell down over the side of the coffin (Fig. 19; Pls. 7 b, 13 c), and the far end of the box fell down at the southwest corner of the coffin. In this last case a few of the inlays and parts of the thin gold shreds could not be identified amongst the tangled floor debris. The sides of the box seem to have been beveled and fastened together with wooden pegs. The lid had two battens on the underside, one at each end, 5·5 cm. wide and 1·5 cm. thick, to hold it in place. A small knob in the center of the lid had almost completely decayed and had to be replaced by a new wooden knob in the reconstruction (see Figs. 28, 29; Pls. 7, 11–13).

The box, as reconstructed (Pl. 12), is 157·5 cm. long, 21·5 cm. wide, and 18·5 cm. high. With the lid in place, the height measures 20 cm. The work of reconstruction was commenced by Haggi Ahmed Youssef, technical assistant in the Cairo Museum, on May 15, 1937. It was completed on March 9, 1938. During this time a full-scale copy was prepared for the Boston Museum in addition to the reconstituted original which was delivered to the Cairo Museum. Ahmed Youssef found that it was necessary to cut the designs to a depth of 4 mm. in the wood in order to allow 2 mm. for the thickness of the faïence and 2 mm. for the binding material which he prepared from a mixture of gum arabic, gesso, and water.[1] The gold was very thin and in many cases badly torn, while the inlays were in an extremely fragile condition. The carving of the designs to an exact size to take the inlays required considerable skill to begin with, and the fixing of gold and inlays proved a laborious process. The photographs of the completed box on Pl. 12, when compared with the drawing of the inlays in place in Fig. 19 and the photographs on Pls. 11 and 13, give some idea of the beautiful craftsmanship and skill shown by Ahmed Youssef in this difficult task.

The inscription on each of the two sides is identical and only one side is shown in the drawing in Fig. 28 and on Pl. 12. On both the sides and lid these inscriptions are bordered by a feather pattern formed of inlays which must originally have been blue-green and black, like those on the footboard of the bed, the second armchair, and the gold-covered box with the inlaid lid. The coloring has almost entirely disappeared on all the inlays of the curtain box so that its original nature is difficult to determine, particularly in the case of the hieroglyphs of the inscriptions. On the lid (Fig. 28 b; Pl. 12), the central knob is set into a small element of five feather strips which separate two flanking inscriptions with their hieroglyphs centered on the name of Sneferu. A wider feather element separates two similarly flanking inscriptions on each side of the box. On the right of the lid inscription, the Goddess Nekhbet in the form of a vulture (with her name written out behind her) faces left and stretches out a Was scepter and a *šn* sign to the name of the king which is written in hieroglyphics facing to the right: 'The Horus Neb-maat, Sneferu (in a cartouche), endowed with life forever.' Adjoining the central knob and facing left, the Cobra Goddess Wazet holds out a Was scepter and a *šn* sign to the king's cartouche which faces to the right: 'Sneferu, Foremost of the Ka(s) of the living, eternally.'[2]

---

[1] Lucas analyzed the original backing of inlays from the Hetep-heres tomb as being carbonate of lime (whiting) which he thought was probably mixed with size (glue). No trace of resin as a binder was found.

[2] Although the *kꜣ* and *ꜥnḫ* are in the singular here, it would appear that this is a shortened form for the *wn f ḫnt kꜣw ꜥnḫw ḏt* which appears as an epithet of Sahura in his funerary temple (Borchardt, *Das Grabdenkmal des Königs Śaꜣḥu-reꜥ*, pl. 8).

On the side of the box, the right-hand inscription has again Nekhbet facing left with the epithet 'Mistress of the Temple' (*Ḥ.t-nṯr*, the Upper Egyptian Shrine at Hierakonpolis). Then comes the cartouche of Sneferu with the signs facing right, followed by the Goddess 'Wazet, Mistress of the Per-nu (Lower Egyptian Shrine at Buto)', and 'The Horus Neb-maat'. To the left of the central feather pattern is repeated this same group of inscriptions. The whole of this decoration appears again on the other side of the box. The arrangement of the inscriptions on the sides has a more formal balance than it does on the lid. The king's cartouche stands between the tutelary goddesses of Upper and Lower Egypt. There is not the alternation between his Horus name and an epithet. In fact, his Horus name appears twice, flanking the central feather pattern (Pl. 12).

The north end of the box has a seated figure of the king wearing a simple fillet and holding a staff (Pl. 11; Fig. 29 b). Behind him is his cartouche name Sneferu and facing him in front is his Horus name, Neb-maat, in a paneled frame. Above him the Vulture Goddess, Nekhbet, spreads her wings, while behind the Horus frame the Uraeus Wazet is poised on a papyrus standard.

The south end of the box is decorated with the first known representation of the winged sun's disk surmounting the king's cartouche (Pl. 11; Fig. 29 a). To the right of the cartouche is the king's Horus name with a Was scepter beside it. On the left of the cartouche are the hieroglyphic signs for the phrase: 'Protection behind (him), living eternally' (cf. discussion of designs on inlaid lid of box in Chapter V).

IV

THE TWO ARMCHAIRS, THE BED, AND CARRYING-CHAIR; COPPER TOOLS, ETC.

A. THE ARMCHAIRS

THE wood of the two armchairs had completely decayed. The first chair stood with its back to the alabaster sarcophagus (Fig. 19). The legs nearest to the entrance of the tomb stood on the filling of the unfinished cutting in the floor, and as this filling subsided, the right side of the chair fell down into the depression thus formed (Pl. 14). The parts of the left side of the chair gradually dropped on the flat surface of the floor in such a fashion that their form was easily recognizable (Pl. 15). The chair frame had been covered with thin gold sheeting which still retained faint marks indicating where the pieces of gold had overlapped. In addition, the cut-out areas for the mortises and tenons suggested how the parts had been joined. The chair legs had collapsed close to the position in which they had originally been standing vertically. Their gold casings had somewhat flattened out, but Mr. Stewart found that when he held a sheet of gold in the hollow of his hand the lion's leg resumed its original form. The rilled gold sheathing under the paws of the lion's legs had been fitted with a circular copper disk (see Fig. 31 and Pls. 15, 16).

Plain boards without gold covering seem to have been used for the seat of the chair and also for the back panel. The back board was set in a plain gold-covered frame with a single supporting strut down the middle of the back, on the outside. The top of the arm was semicircular in section with a ribbed upper surface. The front support of the arm had a simple mat pattern. These patterns were evidently carved in the wood and the thin gold pressed down over them. The papyrus flowers and lion's legs were, of course, carved in wood over which the gold was worked into its proper shape.

The legs of the chair were low and the seat very wide and deep. The seat sloped down slightly from front to back, the front legs being 28 cm. high and the back only 26 cm. The total height of the back from the floor is 79·5 cm., while the total width of the frame of the seat is 71 cm. with a depth of 66 cm. The bars of this frame are rounded at the sides. The details of the joining are given in Fig. 31, while photographs of the chair are shown on Pls. 15 and 16.

Mr. Stewart in his notes described the construction of the chair as follows:

> The front supports for the arms are not quite upright but slope backwards, there being a difference of almost one centimeter in the inside measurements between the supports and the back frame. The distance measured on the seat is 44·2 cm., while that under the arm is 43·3 cm. The central flower stem is not quite in the middle but is placed upright and there is a slight irregularity in the disposition of the side flowers which are not absolutely symmetrical. The two groups differ also, the lower stems of the left group being splayed out much wider than those of the right group.
>
> The flower groups are held together by doweling the stems to the central tie and by dowels in the back, arms, supports and seat which frame the groups. The mortise and tenon joints of the arms, both at the back and the front supports, are further strengthened by leather ties passed diagonally through the tenons, the leather thongs being hidden where they would appear on the surface by small gold patches glued in position when the assemblage was complete. Wood pins hold the tenons of the legs, back frames and arm supports into the seat frame.
>
> The flower groups were covered with gold before assembly. The arms, supports, legs and central stay of the back panel were similarly treated. The gold was applied after assembly to the frame of the seat and the back panel. The back panel was slid into

position on its framework, the back stay adjusted and the whole then fixed in place on the seat frame after the legs had been fixed in position. The flower groups were then fixed into the seat frame and the arms and supports put in place, pinned and tied with leather thongs. The seat may have been removable as there is no evidence that it was a fixture but it was evidently covered with a deep cushion.

In the space under the chair seat lay several torn fragments of worked gold which can be restored to form a large part of the seated figure of a woman smelling a lotus flower, evidently representing the queen herself (Fig. 30; Pl. 14). These had been worked in rather high bold relief over a carved wooden surface. As has been stated in Chapter II, the general style of the figure and the big bracelets which cover the woman's forearms recall reliefs in stone of the reigns of Sneferu and Cheops. While it is of course possible that this figure may have decorated the back panel of the chair, the proportions of the design do not accord well with such a position. It is more likely that this figure comes from the lid of a small box which was placed under the chair although all other traces of such a box (presumably of wood) have vanished.

The second armchair (Fig. 32; Pls. 17–24) contrasts with the broad simple design of the first piece, although in size and general construction it must have resembled it. Instead of the large, relatively plain gold surfaces, there is here an elaborate incrustation of colored inlays. There were similar gold lion's legs but in a much more fragmentary condition than in the case of the first armchair. The position in which these legs lay and that in which the inlays of the arms and back had subsided indicate that this chair stood at right angles to the first, facing the entrance and with its back close to the end of the bed and the carrying-chair, which lay along the west wall (Fig. 19). The inlays lay in several layers and, to make their identification more difficult, were juxtaposed to other inlaid pieces—the footboard of the bed, the lid of a gold box, and an inlaid walking-stick. The two photographs on Pl. 17 show how the gold covering of the upper part of the right arm of the chair lay roughly at right angles to the west wall, while the similar gold pieces from the left arm lay close against this wall. They are covered with a crisscross mat pattern and are shown in detail on the lower part of Pl. 24. With them are shown the plain gold pieces which covered the under surface of the chair arms (lower right corner of Pl. 24 a). Two of these show cuttings where a tenon on the head of the inlaid Horus hawk must have joined with the top of the arm. The narrow gold strips with mat patterns on Pl. 24 a have now been identified as framing strips for the lid and corner of the box (Figs. 39, 40). Probably none of them formed any part of the armchair.

In the pictures on Pl. 17 can be seen fairly clearly the wings of the Horus hawk which, standing on its palm column, formed the openwork pattern of the right arm of the chair (see also Pl. 19). In the center of the picture (Pl. 17 b), in front of the two gold palm-capital ends of the carrying-chair poles, lies a roughly rectangular area of blue-green inlays. These formed the background for the Neith standards which decorated the outer face of the chair back. Slanting across these are the heavy gold casings of the back frame of the carrying-chair seat. In Fig. 19 we have seen that the carrying-chair rested at an angle on the bed (which lay upside down). Its back then sloped down towards the back of the armchair. As the wooden parts of the furniture slowly decayed and the wooden panels worked loose from their frames, the carrying-chair evidently struck the back of the chair, swinging it slightly around toward the wall and pushing its back panel forward on its face. When the mat-pattern inlays were cleared, it was found that the front face of the chair back had been covered with a similar design of Neith emblems on a gold ground which now lay with its back up (Pl. 20).

In Pl. 17 the hawk inlays of the left arm are hidden under the leg of the bed which fell on top of them. However, it is possible to see the feather pattern that covered the front post of the right chair arm and bits of the flower border that ran underneath the palm column which supported the hawk on this arm. It will hardly be surprising if these details are not immediately clear to the reader. Once the relationship of the various patterns became evident, it was not too difficult to trace out the way in which they had fallen in the drawings and photographs of the Expedition's record. In the course of the exceedingly difficult task of removing these fragile inlays and torn gold sheets, it had been possible to place these on trays in the correct position of the original designs. However, it was a long time before it became clear that these patterns formed the decoration of the chair which was known to exist because of the four lion's legs. Finally, in the winter of 1949–1950, the nature of the evidence was finally understood and the reconstructed drawing in Fig. 32 could be undertaken.

Plates 18 and 19, when compared with Fig. 32, should give a good impression of the inlaid arms of the chair. The front support was wider as seen from the side and was covered with a vertical feather pattern on front and outer side. On the outside, below, a horizontal band of feather pattern alternating with flower rosettes formed a base for the plant column and hawk. We will find this same feather and rosette band used on the footboard of the bed (Pl. 25) and on the inlaid lid of the box (Fig. 40). There were no inlays which could be assigned to the inner surface of the frame of the arm, although the hawks and the plants on which they are poised were inlaid on both the outer and inner faces. Perhaps the frame on the inside was covered with gold which has not been identified, like the frame of the chair seat. The design of a hawk resting on a plant in the shape of a palm column appears to be new, as is so much of the decoration of the Hetep-heres furniture.

In Pls. 20 and 21 can be seen the front face of the back panel of the chair which had a projecting frame with an inlaid pattern of rosettes and feathers. The chief design consists of four standards with pendent streamers which support the shields and crossed arrows that form the emblem of the Goddess Neith. Above these was a border of pendent hook-shaped forms which suggest a conventionalized representation of the side-lock of hair worn by children. This lock of hair sometimes appears also in ladies' wigs. The significance of these locks in connection with the Goddess Neith is at present obscure. All these designs are worked out in colored faïence inlays set in a background of plain gold sheeting. The colors of the faïence have faded, although the flower and feather patterns were certainly blue-green and black.

In Pls. 20 and 21 it is clear that the Neith panel just described lay on its face, slantwise across the flower panel of the bed footboard. It can also be seen that the faïence inlays representing mat work (see also Pl. 17) lay on top of the Neith panel. Closer scrutiny of Pls. 20 a and b and 17 b will show that a narrow vertical element of flower and feather pattern ran down between two sections of these mat-work inlays. There were actually three more sections of this border pattern (four in all). It was possible to trace out from their original position that these formed the frame and dividing strut for the back surface of the chair back, as laid out in Pl. 23. The portion of the outer right side is shown lying in position on the lower part of Pl. 23. Numerous fragments of plaster Neith emblems and standards, which were picked up from among the faïence mat inlays, were now found to correspond to pieces of gold sheeting which had been pressed down over them and survived in a better-preserved condition than the plaster. It was only natural to attempt to reconstruct the arrangement of these standards on the basis of the design on the front face of the chair back. The gold pieces on Pl. 22 were arranged for photography with this in mind. It eventually became clear that there was not enough gold sheeting to make up four standards. Once it was realized that there were really only two of these elements, it was then possible to compose a design from the extant material which would fit inside the flower borders and would correspond in measurement to the front of the chair back. What seems to be the correct solution of the puzzle presented by these inlays is shown in the drawing on the left of Fig. 32. This must have been a design of startling brilliance when the two gold standards bearing Neith emblems stood out against the irregular blue-green surface of zigzag inlays imitating mat work. Projecting slightly forward around these panels was the framework cased in thin gold with its flower and feather inlays of blue-green and black.

In the furniture which we have examined so far many of the designs seem to have their origin in Lower Egypt. The inscriptions which concern themselves with Sneferu naturally emphasize the joining of the two lands. The Min emblems on the lid of an inlaid box and on a walking-stick which will be discussed later apparently come from the south. In the case of the Horus hawks on the arms of the chair, one faces the conflicting claims made by historians of religion as to the Upper or Lower Egyptian origin of this god. The association of the hawk with the emblems of the Delta Goddess Neith possibly points to Lower Egypt. Originally this design may have symbolized one of the numerous local gods that took the form of a hawk. The popular feather pattern certainly derives from the plumage of one of these falcons, as does the verbal imagery of the bright-feathered winged god soaring in the heavens. I have speculated in my *History of Egyptian Sculpture and Painting in the Old Kingdom*, pp. 146–8, upon the curious combination of the hair-lock with the emblems of Neith and also upon the relation between the beetle and these emblems. I was struck by the resemblance between the vertical markings on the plaster shields and the markings on the back of the beetle as it appears in the Early Dynastic representations which Louis Keimer has studied in *Annales du Service des Antiquités*, 31 (1931), 149 ff. There he has called attention to the Neith emblem on a gold capsule in the form of a beetle from Naga-ed-Dêr and to two beetles carved beside a Neith standard on a schist plaque in Brussels. Dr. Margaret A. Murray (*The Museums Journal*, London, vol. 47, 1947, p. 37) considers it futile to question the nature of the shields in the Neith emblem on the basis of a resemblance to the markings of the beetle. While this certainly seems reasonable, there is still a curious relationship, difficult to express, between these representations of the beetle and the Goddess of Sais.

There would also appear to be some connection between the side-lock worn by the Libyans and the hooked patterns shown above the Neith standards on the Hetep-heres chair. Perhaps, at the least, one might see here a mingling of ideas between peoples living along the western edge of the Delta.

The tied papyrus flowers on the arms of the first armchair are certainly of northern origin. More difficult is the identification of the buds and opened flowers which form the rosettes frequently used in the Hetep-heres designs, but there is certainly a suggestion of the sedge-like plant which grows beside the boys who are trapping waterfowl at Medum (W. S. Smith, *Journal of Egyptian Archaeology*, 23, 1937, 17 ff.). They have plucked these flowers and woven them into crowns which form a fascinating transition from the natural form of the growing plant to the stylized flowers on the headband of the famous statue of Nofret from a neighboring tomb (*cf.* Nina M. Davies, *Ancient Egyptian Paintings*, I, 1936, pl. I, and L. Borchardt, *Statuen*, I, p. 5; R. Hamann, *Ägyptische Kunst*, 1944, p. 119, fig. 121). Later in the Old Kingdom, these rosette forms incorporate buds and bound papyrus elements, in shape like the Atef crown as it appears on the hawk of the Hetep-heres bed-canopy inscription (Pl. 8). These rosettes provide a basis for voluted forms which were given a new development in the elaborate plant forms of the ceiling decorations and scarabs of the Middle Kingdom.

It is similarly difficult to localize the palm form on which the hawk rests on the arm of the chair. Beaten in heavy gold, the palm capital also forms the ends of the carrying-chair poles. It should be pointed out, though, that here we may have an Upper Egyptian element, like the Min signs. On the sides of the statue-thrones of Chephren and Mycerinus, a palm form is interchanged with a voluted flower (the so-called lily in an early guise) as well as a sedge-like flower (which also forms the upper part of the voluted plant on a Chephren statue). Each of these three plants represents the south, being intertwined with the papyrus of the north to represent the union of the two lands (Smith, *A History* . . . figs. 11 and 12).

B. THE BED

In examining the remains of the bed as they lay in position (Fig. 19; Pls. 17, 25, 31), it must be remembered that, not only was it placed upside down, but it was turned around so that its head end lay toward the entrance and the foot toward the south wall. The longer legs of the head end thus stood up in the air behind the second armchair, outside the back poles of the carrying-chair (Fig. 20). The shorter legs were thus at the south end of the chamber. The footboard had been removed in transferring the furniture and evidently stood resting against the head end of the bed. A certain amount of the wood was preserved from both bed and carrying-chair, particularly in the case of the wooden cores of the lion's legs, two of which are shown on Pl. 26 b. The boarding which covered the bed fell down with its two longitudinal slats uppermost. Over this subsided the wood of the flooring of the carrying-chair. While the wood had largely decayed into small shreds of the consistency of cigar ash, the fibers from the boards of the bed showed cross-boarding inside an outer frame. Two lines of wood fibers from the sides of this frame could be seen running along the length of the bed (Fig. 19; Pls. 30, 32). A minute examination made it possible to work out how the boarding fitted into the grooves in the side and end bars of the bed. Mr. Stewart felt that the only doubtful point in the construction was the miter-joint with its transverse tenon held in place by wooden pegs. However, he thought that since this method of construction was evident in other wooden objects it could be considered justifiable (Fig. 33).

The gold of the bed casing was thicker than that of the two armchairs. The legs and the papyrus ends of the side bars were well preserved (Pl. 26). The holes in the gold, the marks of the overlapping, and the turned-over edges of the gold sheets gave Mr. Stewart the evidence for the joining of the underlying wooden parts. The details of these joints, as well as the way in which the tops of the legs were fastened to the frame by leather thongs, are shown in Fig. 33 and in the photographs on Pl. 26. The frame of the footboard had two wooden tenons on the bottom which fitted into copper sockets in the crossbar of the bed frame. The panel of the footboard was decorated on the face towards the bed by the now familiar feather and rosette pattern. In this case the upper of the two horizontal bands consisted only of feather pattern, while the lower band contained three flower rosettes (Pl. 25). The outer face of the footboard showed only the plain surface of the wood.

The length of the bed frame (including the papyrus ends) was 177·8 cm., and the width measured 97 cm. It sloped considerably from head to foot end. The top surface stood 35·5 cm. above the floor at the head and 21·5 cm. at the foot. There must have been some sort of a mattress on the bed, and with this was used the gold and silver covered headrest which was found in the gold box with the inlaid lid (Pl. 39; Figs. 38–40). The headrest will be described with the other contents of that box in Chapter V.

Finally, I should like to quote Mr. Stewart's account of the ingenious method which he used for restoring the bed legs, given in his notes as follows:

> The legs were all badly split and the right leg had been flattened out of shape and its two halves had come apart. They had originally been made by modeling sheet gold over carved wood legs, the two halves being fixed by a lap joint held in place by numerous gold pins on a line down the back. The ribbed base was also fixed under the claws with gold pins and was terminated with a copper cap fixed on by four copper nails driven up into the leg from underneath. It was obviously impossible to replace the gold around the carved wooden legs, even if it had been possible to carve the wood to fit exactly to the modeling of the gold, without opening out the gold, thus destroying the modeling and removing all the gold pins. The legs were therefore made solid with plaster.

The breaks were carefully fitted together and the cases bound with cotton tape and plastic wood was applied to the inside of all the breaks with a spatula. When this was dry, a group of four fine wires one-eighth of an inch thick, bound together with iron wires, was inserted through the center of each leg case, the wires being opened out towards the top and allowed to project to about two-thirds of the length required for the tenon. The case was then filled nearly to the top with a mixture of plaster of Paris and glue and allowed to set.

A wood block was then cut to shape to fit closely inside the remaining space, allowing the necessary projection for the tenon. Four holes and a groove were cut to take the projecting wires. The block was coated with plastic wood and forced into position, the plastic wood filling out any space between the wood and the gold. Its upper surface was then carved to follow the line of the gold leg case and to fit to the curved underside of the frame. By this means, the original modeling of the gold has been retained but the joint is re-made in its original form, the binding thongs passing through holes drilled in the wood blocks (see Pl. 26 c).

C. THE CARRYING-CHAIR

The wood of the carrying-chair was even better preserved than that of the bed, although it was found to have shrunk to about one-sixth of its original volume. The wooden cores of two of the palm ends of the poles are shown in Pl. 27 as well as one of the floor boards, the frame of the armrest on one side, and the long upper frame of one of the side boards of the footrest. Here, one can not only see how the mat pattern was cut out of the wood before casing it with gold, but there is preserved the system of tenons and the beveling. The gold was even heavier than that used on the bed casing. Again, as in the case of the bed canopy, Mr. Gerte believed, in making his copy of this piece for the Boston Museum, that the fine cross lines of the matting pattern were punched into the gold with a die. Figure 34 gives the results of Mr. Stewart's study of the construction. As in the case of the first armchair (Fig. 31) and the bed (Fig. 33), this drawing incorporates many of the results worked out in innumerable preliminary drawings by Dows Dunham, who prepared a first reconstruction in soft wood before Mr. Stewart made the final hardwood frame. In Fig. 34 can be seen all the details of the joinery, the thong ties used for additional fastening, and the four copper staples that held a leather cord which was stretched between the poles just in front and behind the body of the chair.

The total length of the poles was 206·5 cm. and that of the seat with its footrest 99 cm. The height of the back of the seat was 52 cm. above the poles, and the width of the flooring of the chair narrowed from 53·5 cm. in front to a little over 52 cm. at the back.

Inside the back of the chair, at the height of the top of the chair arms, there was a cross strip of wood (in all probability ebony) which contained a horizontal inscription. This was formed of tiny hieroglyphs in solid gold and gave the name and titles of the queen (Pls. 27 a, 28 b, and 29 a). The inscription reads: 'Mother of the King of Upper and Lower Egypt, the Follower of Horus, She who is in charge of the affairs of the *ỉmꜣt* (? Harem), She whose every word is done for her, the Daughter of the God of his body, Hetep-heres'. The same inscription appears again on three vertical strips (again, probably of ebony) which ran down the back of the chair seat (Pls. 28 a, 29 b, c). These gold hieroglyphs had dropped to the floor but lay in their original order mixed with the inlays from the back of the armchair (see detail, Pl. 28 c). The delicate task of fitting them into the new ebony panels was undertaken by Miss Marion Thompson (Mrs. Dows Dunham).

I should like to quote once more from Mr. Stewart's notes his description of the construction of the carrying-chair and the restoration work carried out by him:

> The carpentry construction was based upon evidence of the shrunken wood panels and other portions which, though badly decayed, still retained sufficient form to identify some of the more interesting joints. The gold framework of the side panels and arms was almost intact and showed clearly the original sections. The whole of the framework was covered with gold before assembly. The tenons of the frame were held in place by wood pegs which were afterwards covered by round headed gold nails (shown in the side view in Fig. 34 at N, N, N). The large scale drawing of the corner post A shows the double tenon to receive the upper frames of the side and end panels and the single tenon which was secured to the carrying pole by a peg driven through

from the rebate of the floor board. This system is shown also in the section of the arm upright (in the upper right hand corner of Fig. 34). The panels were beveled into the frames but tenons were used in addition along the mitres as shown in the drawing of a side panel with the tenons in place, and in the section along line C–D. The panels were flush with the framework on the inside. This is shown in the section of the back of the seat. The original shrunken panels found in the tomb show remarkably accurate cutting of the bevels and tenons. A portion of one of the arms (Pl. 27) showed that the mat patterns had been carefully carved on the woodwork before the gold had been applied and modeled into it.

The joint of the framework at A shows a very unusual feature in the hidden mitre, a perspective view of which is given in the large scale drawing of the side bar in the lower right-hand corner of Fig. 34.

After placing the framework in position on the corner post, a leather thong was passed through the holes in the mitre and tied firmly on the long side in the groove between the two holes. The knot and also the exposed thong on the opposite side were afterwards covered by a gold patch fixed in place by means of small gold pins. The sunk lines of the mat pattern were then worked over the patches to correspond with the surrounding design. Leather thongs were also used to secure further the upper arm joints into the uprights at the back and to tie together the uprights and the top cross bar. They were also hidden by gold patches.

The form of the back stay A was evident from the shape and condition of the gold casing at the top bar but there was no direct evidence as to how the ebony veneer had been fixed. It is possible that these strips may have been pinned to the bars before the gold hieroglyphs were inlaid and the pins hidden by the inlays. In the reconstruction we glued the veneers onto the bars and further fixed them by two screws at either end which were countersunk and the heads hidden by gluing in plugs of ebony. The original copper staples could not be used in the reconstruction as the bent over ends would have broken if we had tried to straighten them out, so new ones had to be made. They were pushed through the poles for a distance of 3·5 cm. as indicated by corrosion marks on the original staples. The ends were then bent over and hammered into the wood along the grain, as in the original chair. The length of the poles is conjectural but we were enabled to calculate this fairly exactly by a comparison of proportion with a wall relief of a similar chair in the tomb of Meresankh III (G 7530–7540), discovered by this expedition at Giza.

The palm capitals at the end of the poles were made separately and a square tenon was worked in the wood to enter a corresponding mortise hole in the poles. The gold covering was evidently first made as a splayed tube from one sheet and the joint was arranged to run up one of the edges of the palm frond. It was a lap joint interlocking the edges and was then burnished and modeled to the required angle. The tops were modeled separately to the carved wood and were bent over the sides for a distance of about two millimeters, and fixed in place with numerous small gold pins driven through both sheets of gold into the wood. The edge of the gold ribbing at the junction of the capitals with the poles was bent over at a right angle and thus hidden when the capitals were fixed to the poles. In our reconstruction, as we had to fill the gold capitals with plaster of Paris, we made tenons on the pole ends and cut away the plaster filling in the capitals to receive these.

D. COPPER TOOLS AND SMALL OBJECTS, LARGELY FROM THE AREA UNDER BED AND CARRYING-CHAIR

It has been impossible to identify two gold pieces 52 cm. long and 6 cm. wide. They were rounded at one end and decorated with cross ribbing inside a narrow border (upper part of Pl. 32 a). They lay in the debris of the wooden floor boards of the bed and carrying-chair (Fig. 19; Pl. 32 b). It would seem that they should belong to one of these pieces of furniture, but there appears to be no place for them, and for the present they must remain an unsolved mystery.

Several other objects lay in this area. An alabaster bowl (No. 563; Fig. 146; Pl. 32 b) seems to have slipped out from the box of pottery upon which rested the foot end of the bed. Partly in this bowl and also along the west wall were some tiny mud models of pottery jars, twelve with jar stoppers indicated and fourteen without (Fig. 35 gives a sample of each). They were 5 to 6 cm. high. Mixed with them were two small bones which had been worked into tools, one 8·3 cm. long and the other 3·8 cm. (Fig. 35; Pl. 30, where one shows in position near the chisel).

Farther out in the room were three heavy copper implements (Pl. 30), a chisel (No. 566; 30·4 cm. long; Fig. 36), a knife with decayed wooden handle (No. 596; Fig. 36), and a punch (No. 565; 19 cm. long; Fig. 36).

Another group of practical tools which, like these, were probably left behind by the workmen can be seen in Figs. 19 and 20. They were probably laid on top of the second wooden box south of the alabaster sarcophagus. These had largely decomposed into a large mass of green hydrated copper which spread out over the top of the pile of pottery, just south of a group of alabaster vessels. The position of this green powder can be seen in Pl. 6 with some suggestion of the shape of the tools. They lay in two groups, one comprising four tools, and the other six, a little to the east of the first group. Of these only three could be recovered (No. 1058: 4, 6, 7). These are shown in Fig. 37 and on Pl. 30, where they are photographed with the three tools from underneath the bed. No. 1058: 7 is a heavy chisel like that found on the floor, while No. 1058:6 is a similar tool with a narrower blade. The third tool is a punch (No. 1058:4).

V

THE INLAID BOX WITH ITS CONTENTS AND THE CASE WITH THE WALKING-STICKS

A. THE INLAID BOX

THE objects which lay to the south of the first armchair all rested on a layer of decayed wood. This area, west of the sarcophagus, is circumscribed by the armchair, the bed on the west, and an imaginary extension of the line of the southern side of the alabaster sarcophagus. Lying here (from north to south) were the alabaster ointment vessels which had stood originally in a wooden box, the copper ewer and basin, a large pottery jar, a cylinder jar and bowl of alabaster, a bowl of red pottery, the headrest, the gold-covered box containing silver bracelets, and some toilet articles. Over these had been laid a piece of beadwork, parts of which were scattered over the whole area. Also resting on top of these objects and lying in the interstices between them were pieces of inlay. Some inlays had fortunately retained enough of the original pattern so that it has been possible to restore this as the decoration of the lid of a large box which contained all the above-mentioned objects.

The flooring of the box was indicated by the layer of wood underneath the objects. Mixed with the inlays were pieces of rilled gold sheeting and narrow gold strips marked with mat-work design or vertical ribbing. Many pieces lay in close contact with the similar sheets which covered the bracelet box, but when the latter had been eliminated, it was realized that the other pieces lay where they might be expected as the result of the collapse of the large outer case. As has been stated in Chapter II, this outer box and its contents slumped forward to the west in the process of decay, because the floor of the box rested unevenly on a fragment of limestone (see Fig. 38). With the exception of the floor boards, the box was covered with gold on the outside. It had no gold lining.

An attempt has been made in Fig. 38 to suggest how the objects were originally packed in this case. The description in Chapter II of the way in which they subsided can be checked with Pls. 32–41. The length of the box could be determined from several factors: first, by the position of the objects as they rested on the floor—the length from the alabaster vessels to the southern end of the sarcophagus was roughly 85 cm. (see Fig. 19). More or less in position at the two ends lay the two strips that covered the ends of the lid, bent under and around two cleats which were fastened on the under side of the lid to hold it in position when it was placed on the box (Fig. 39; Pl. 33 a, where one is photographed laid out flat). Second, enough hieroglyphs were preserved from the inscription which ran horizontally along the central portion of the lid to indicate that they formed the same titles and name of the queen as appear on the carrying-chair (Fig. 40; Pl. 35 b). The length of this inscription could be estimated to correspond to that suggested by the position of the contents of the box as they lay on the floor. It was finally recognized that the squares of horizontally ribbed gold sheeting comprised one sheet 44 cm. × 22 cm. and two sheets 22 cm. × 22 cm., which could be combined to form a large sheet 88 cm. long and 22 cm. high. There were nearly enough odd sheets and fragments to make up a second set like this first. These, therefore, formed the sides of the box (Fig. 39; Pl. 33 a).

There were also some strips of gold with vertical ribbing (samples on lower part of Pl. 32 a) which were sufficient in number to form two bands on each side of the box. One band (3 cm. high) was narrower than the other and corresponds to the ribbed portion of the gold which was folded up over the end of the lid (Fig. 39; Pl. 33 a). This narrow band evidently ran along the top of the side of the box, while a wider band (5 cm. high) ran along the base. It did not continue across the ends of the box.

The box, then, seems to have had a total length of 88 cm., while the combined measurements of the height of the gold pieces on the side would give a total height of 30 cm., not including a slight addition for the thickness of the floor board. The length agrees well with that of the inscription on the lid and the position of the objects on the floor, while the height agrees with that of the two remaining gold sheets with horizontal rilling (28 cm. high and 32 cm. wide) which evidently formed the ends of the box. It will be seen from the drawing in Fig. 39 that the lid fits down between the sides of the box, the ribbed ends showing where they rested on the somewhat lower box ends. If we add to the height of the box end (28 cm.) the vertically ribbed band (3 cm. high) on the end of the lid, the resulting vertical measurement is 31 cm. The difference of 1 cm. (between 30 cm. for the side of the box and 31 cm. for the ends with the lid in place) has been adjusted in the restored drawing in Fig. 39 by making the sides of the box 31 cm. high. It seems reasonable to allow for a margin of error here, since when the measurements of the gold sheets were taken in Egypt in 1947, it was not realized how they had been originally utilized and all varied somewhat from the mean measurements of the sheets (22 × 22 cm. and 44 × 22 cm.) which had been recorded for them during the clearance of the tomb.

The drawing in Fig. 39 shows how the thickness of the side boards along the top as well as at the two ends was covered by a narrow gold strip decorated with matting pattern. The inlaid upper surface of the lid was also framed with a narrow mat border (Figs. 39, 40). Samples of these mat-work strips appear in Pl. 24 a because they were mistaken for parts of the second armchair and photographed with them. Not quite enough of these gold strips were recovered to make up the required length, but it would seem that enough have survived to justify placing them in position in the restored drawing. One small fragment was found adhering to two border inlays, indicating that this pattern actually ran around the top of the lid. Another piece, which covered the thickness of the board on one side of the box, can be seen adhering to the rilled sheet on Pl. 33 a. When this photograph was taken, the gold sheets had been laid on top of one another in a pile and the two upper sheets lie side by side with their rilling in a vertical position. The small section of mat pattern is attached to the right side of the rilled sheet lying underneath.[1]

The most important elements for the correct restoration of the box are the two rectangular gold strips creased to fold around the wood which they encased (seen one lying on top of the other in Pl. 33 a). After much experiment, it would seem that they can only be made to fit around the end of the lid, a narrow strip of its underside, and the outer side and lower face of a narrow horizontal cleat attached to the bottom of the lid (Fig. 39). When placed thus, it has been seen how well the vertical ribbing of the end of the lid matches the vertically ribbed band which runs along the sides of the box. With the lid in place this band then runs around the whole box. The width of the gold pieces covering the end of the lid was recorded as 36·5 cm. and 37 cm., respectively, and thus accords well with the width of 38 cm. measured for the width of the gold sheets covering the ends of the box.

Although the reconstruction of the design on the lid of the box went along side by side with the piecing together of the gold elements from the sides of the box, it could not be completed until the significance of the two gold strips just discussed was understood. These pieces made it fairly certain that the width of the lid was 38 cm., while it was already evident that the length must be 88 cm. The inlays which had adhered in small groups on top of the collapsed bracelet box could be recorded in place and lifted onto trays with a considerable portion of the pattern recognizable (Pls. 34 d, 35). The relationship between the hieroglyphs forming the inscription ending with the name of the queen and the upper part of the design was fairly well understood (although the throne was omitted in the hieroglyph of the seated queen) in the sketch made at the time of clearing the pieces (cf. Fig. 40 with Smith, *A History* . . . fig. 56). However, this sketch was really a composite drawing made from parts near the center of the upper part of the box lid combined with the name of the queen and a few bits of flower and feather pattern, as well as two inlays from the left-hand border. A careful examination of the Expedition record showed that the hieroglyphs with the queen's name, as well as the other inlays from the left end of the lid, actually came from the area north of the gold sheets of the bracelet box, beside the alabaster bowl. This bowl had been resting on the sloping floor of the box, with the red pottery bowl and alabaster ointment jar inside it forming a fairly heavy weight. These vessels seem to have slipped through the side of the box before its final collapse, since one leg of the bed first fell with its foot in the alabaster bowl (Pl. 38 b), then the gold bracelet box collapsed on top of the bed leg (Pl. 37 b). Finally, the inlays from the lid of the outer container subsided on top of all the rest, some groups of inlays falling down into the interstices of the irregular surface of the deposit, but still retaining a semblance of their original relationship.

---

[1] In July 1951 it was possible to examine the material in Cairo with Ahmed Youssef, who proposes to restore both box and armchair. It was found that all the pieces of gold from the sides of the box were ribbed vertically (as in Pl. 33 a), while the ends of the box had horizontal ribbing. When the pieces were laid out, it also appears that the length of the box, when restored, will probably be about 85 cm. rather than 88 cm.

Once it was realized that the hieroglyphs forming the name of the queen were found some distance north of that section of the upper part of the design which lay on top of the bracelet box, it was possible to see how the lid inlays could originally have covered the whole contents of the box. It must be remembered that they slid forward to the west, due to the tilting of the box as it rested on a stone on the floor. The hieroglyphs of the queen's titles which should form the beginning of the inscription were found, upon examination of the Expedition record, to lie a little to the south of the bracelet box, just as her name lay a little to the north of it. A thorough check of the position of the rest of the inlays showed that they lay in this north–south line with their horizontal bands of design in the east–west relationship to one another that appears in Fig. 40 from the top to the bottom of that drawing.

Since the width of the lid was greater than could be filled by the design reconstructed in the original sketch of the tomb record, it was obvious that some of the patterns of the upper part were repeated below the inscription. It was found that a flower and feather strip, banded above and below by Min emblems, would best fit this remaining space. Although no actual join between the inscription and these lower elements was found, the portions restored in the lower left and lower right corners of the drawing in Fig. 40 were found in such a position as to make their restoration highly probable. In the lower right corner of the drawing appears a small section of two border inlays with a fragment of the gold matting border adhering to them. These were found closely juxtaposed to the Min emblem drawn above, as well as the flower and feather pattern and the hieroglyphs of the beginning of the inscription. This would appear to make the correct placing of these elements virtually certain.

Thus, while large areas of the pattern must be drawn in broken line in Fig. 40, enough remains (drawn in solid line) to justify the reconstruction. The inlays were difficult to photograph, but Pl. 35 may give some idea of their original position and present condition. Many more loose inlays were found which had been dislocated from their groupings. An attempt was made to arrange these (as in Pl. 35 c) according to patterns, but at the time this was undertaken the whole design was not clearly understood. In Pl. 35 d, for example, some of the Min elements belong to the slightly different pattern applied to the walking-sticks. It might be possible now to assign most of these pieces to their places, if a restoration of the actual pieces of the box can be undertaken.

It was not entirely due to the uneven surface on which the inlays fell that the design of the box lid was less well preserved than the other inlaid designs of the Hetep-heres tomb. Instead of thin gold sheeting which covered the other pieces of furniture and which retained the outlines of the designs filled with inlay, here a background of silver sheeting was used and this had decayed except for small, brittle fragments. The inlays were held together by shreds of almost completely decayed wood, but only in the case where they rested on a comparatively flat surface. Originally the silver must have lent a sumptuous texture to the surface of the lid, contrasting pleasantly with the gold sides of the box. An added richness was given to the design by placing a carnelian disk in the center of each of the flower rosettes and as the round central element of the Min emblems. In the case of the other inlaid pieces from the tomb, the center of the flowers was formed of faïence like the other inlays, but we shall see that carnelian disks were also used in the Min emblems of the inlaid staff. The coloring of the inlays of the box lid had almost entirely faded away except for the blue-green and black elements in the flower and feather patterns. One suspects that other colors were used for the hieroglyphs of the inscription, as in those of the curtain box, but in both cases these have been reduced to a brownish stain or to a cream color that reveals nothing of the original hue.

This box, then, was the most richly decorated object in the tomb. It must have been designed to contain something other than its heterogeneous contents which had perhaps been gathered up from the floor of the first tomb for transport. One would suppose that such a chest would be suitable for wearing apparel. The beadwork, to be described below, may be from a garment that belonged to the original contents. Why the silver bracelets were overlooked by the thieves, who must have removed the rest of the queen's jewelry, must remain a puzzle.[2] It may be that their gold-covered container had originally been placed in the chest and that they were somehow overlooked for this reason. However, it would appear that the original contents of the chest had been disturbed and were at the very least rearranged for transport to the new tomb.

The flower rosettes and intervening feather patterns of the box lid are like those which we have already found on the footboard of the bed and the second armchair. The inscription repeats those of the carrying-chair and reads: 'The Mother of the King of Upper and Lower Egypt, [the Follower of] Horus, [She who is in charge of the affairs of the *imꜣt* (? harem)], She whose every word is done [for her], Daughter [of the God of his body], Hetep-heres.' In addition to these familiar elements, the design contains other patterns which can be paralleled to a certain extent in the inlaid vases from the funerary temple of Neferirkara, as has been stated in Chapter II. The upper strip is composed of a vertical symbol alternating with *šn* signs[3] which seem to represent a seal ring, being round and not oval as in the case of the king's cartouche. The vertical symbol closely resembles the characteristic marking below the 'Eye of Horus'. It has exactly the same form on the heads of the hawks on both the bed canopy inscriptions (Pl. 8) and on the second armchair (Fig. 32; Pls. 18, 19). On the armchair this marking is formed by a separate piece of inlay which, if removed from its gold background, could easily be mistaken for the inlays in the design on the box lid. In the drawing of the box lid (Fig. 40), the projecting point at the side of this symbol has been somewhat blunted, since the type pattern was taken from one among several inlays which varied slightly in shape. It will be seen from the photograph in Pl. 35 c that two or three of the symbols are very much like the shape of the inlays of the hawk heads on the chair. Like the feather patterns, it would appear, then, that this symbol has its origin in the markings of the falcon which was identified with the god Horus. It is used alternatively here with a symbol for 'protection'.

---

[2] The only other objects from the tomb which might have belonged to the queen's jewelry were three tiny crystal eyes. These were 6–7 mm. long. Two have a point blackened to indicate the pupil. They would appear to have fallen out of some inlaid ornament. They were examined again in July 1951 amongst the material stored in the Cairo Museum, but it has been impossible to locate the spot where they were found in the original record of the clearance of the tomb.

[3] This cartouche-like symbol, *šn*, signifies protection for the royal person as in the inscription on the north end of the curtain box (Pl. 11), where it is held in the claws of the vulture goddess Nekhbet over the king, or in the claws of the Horus hawk on Pl. 8 in the bed-canopy inscriptions, or in the Cheops relief illustrated in Fig. 5. It would seem that in the inscription on the north end of the curtain box the symbol in the claws of Nekhbet is intended to stand for the phrase *šn ḥꜣ·f*, balancing the *sꜣ ḥꜣ·*[*f*] on the northern end of the box. That is Nekhbet protects Sneferu in one case while the Sun disk provides the protection in the other (cf. Chapter III).

The other border pattern is composed of emblems of the fertility god Min of Coptos. It frames the inscription, above and below, and forms the lower edge of the whole design. These Min emblems appear on the inlaid vases of Neferirkara (L. Borchardt, *Das Grabdenkmal des Königs Nefer-ỉr-ke-reʿ*, pls. 3, 5, 7) where they alternate with *šn* signs. These vases again employ the vertical feather pattern (as well as the scaled feather pattern not used in the Hetep-heres tomb). This is again found on a fragment of a similar vase from the Valley Temple of Mycerinus (Reisner, *Mycerinus*, pl. 65).

B. THE BEADWORK

Inside the chest with the inlaid lid, and evidently laid out on top of the other objects, had been placed a piece of beadwork which had decayed and fallen down over the whole area. It was composed of tiny ring beads, some of which had adhered in small groups so that the pattern could be reconstructed for a piece about 14 cm. × 15 cm. (Fig. 48 a). The various groups of beads were drawn in the record three times the size of the original. At that time it was recognized that there was an all-over pattern of lozenges against a blue ground. These diamond-shaped lozenges had a black border two beads wide, surrounding an area of yellow beads with a center of nine red beads. On checking over the record, it was found that this main pattern was bordered, probably at the top, by a variation in the pattern and coloring. Above the black-yellow-red diamonds came first a row of alternating black-bordered diamonds. One of these had a yellow background and no center, two had a yellow background and a blue center, and a third a yellow center on a blue background.

Wider areas of the blue background of the main design were left between these diamonds and the smaller lozenges in the next row above, forming a transition to the upper part of the pattern. These background spaces seem to have had centers which alternated between four gold beads and a more complicated form with a blue center and both gold and yellow beads around it (three gold at top and bottom, three yellow on each side). A zigzag line of single black beads formed the base for a smaller row of yellow diamonds in the next row above. The two central diamonds had gold centers. At the top of the design were pendent triangles with an outer border of yellow beads and an inner one of black. The space inside was in one case blue and in the other red. The background area between the yellow diamonds and the pendent triangles was blue as in the rest of the design, but the space in the middle seems to have had a center formed by four gold beads. The bead groups are listed in the original record under the numbers 879, 904, 916, 965, 977, 988, 989, 1104, and 1118. Samples of the beadwork appear in Pl. 41 a, b.

It is difficult to estimate the original quantity of these tiny ring beads. The impression gained is that there were not enough to form a complete garment but some of the beads may have decayed.[4] Those which survived were in a very fragile state and of course only a small proportion of them remained together according to the original stringing (Pl. 41 b). The colors were faded and sometimes had entirely disappeared, but when they were first found it was possible to distinguish the different colors which made up the design. The adhering groups were found particularly along the north, west, and south sides of the bracelet box but had penetrated in amongst the gold sheets of this box. They give the impression that they came from a piece of beadwork laid on top of this box and perhaps extending over some of the other objects that had been placed in the chest with the inlaid lid. The beads were about 2·5 mm. in diameter and are shown at one-half scale in the reconstructed piece shown in Fig. 48 a. While an area of about 15 × 14·5 cm. is fairly well confirmed by the preserved groups which seem to form an interlocking pattern in this reconstruction, it is virtually impossible to guess how much more space could have been covered by the remaining loose beads. The reproduction of the colored drawing in Fig. 48 a unfortunately does not indicate the preserved parts very adequately since it does not differentiate the color values sufficiently. It should be repeated that the preserved groups justify the restoration of at least as large an area as this.

---

[4] The variations between the different elements of the design and the way in which they interlock seem to preclude reconstructing the beadwork in a narrow strip such as is now known in the case of an Old Kingdom belt recently restored in the Cairo

Obviously these ring beads were not arranged in the patterns and shapes known from Old Kingdom broad collars, bracelets or anklets, nor were any long cylinder beads preserved such as form part of these pieces of jewelry or the nets that covered dresses. Similar lozenge designs do occur on the belts of men, but in known examples (see Footnote 4) the beadwork of these belts was laid down over a metal band. No trace of such metal was found in the Hetep-heres deposit and the scattering of the beads seems to indicate that they were part of a larger surface than that formed by the narrow strip of a belt. Small bead bags are known from a late period but none seems to be represented in the Old Kingdom. All Old Kingdom bead dresses seem to have consisted of an openwork crisscross pattern of large cylinder beads with a rather simple border with pendent beads at the bottom (well preserved in the representation of the figure of Meresankh III on the east wall of her rock-cut tomb, G 7530–7540; Smith, *A History . . .* p. 169, fig. 64, where the drawing is too small to show the pendent beads at the bottom of the garment adequately). The shoulder straps were of more closely strung small beads, probably ring beads. They are only represented with cross stripes of alternating colors (in the case of Meresankh III: red, blue, red, white (?), blue, separated by narrow black bands with a white zigzag stripe reserved in the center of each black band).

Old Kingdom basketwork displays similar lozenge patterns to those of the Hetep-heres beadwork. These are well preserved in the tomb of Meresankh III on the east wall (Smith, *A History . . .* pl. 49 a)[5] and in the tomb of Seshem-nofer III at Giza (G 5170; Junker, *Giza*, III, 1938, pl. IV). In the latter case, I noted in 1935 in the mastaba chamber in Tübingen, as well as on the colored drawings made by Bollacher when the tomb was first discovered, that the baskets carried by the personifications of Seshem-nofer's estates were decorated in diamond-shaped patterns of yellow, blue, and green, with the squares outlined in red when they fell on a yellow ground. However, the closest parallel to the designs of the Hetep-heres beadwork is in the complicated patterns imitating mat work which appear on the paneling

---

Museum (No. 87078) by Ahmed Youssef Moustafa. A photograph of this belt as it was found in the sarcophagus of Ptah-shepses at Saqqara was published by Drioton in *Bulletin de l'Institut d'Égypte*, 26 (1944), pp. 77–90, fig. 6; cf. also Brunton in *Annales du Service*, 47 (1947), pp. 125–133. The beadwork of the Ptah-shepses belt was attached to a gold band, and it would seem that similar bead strips fastened to copper bands are represented by the fragments found in the Giza burial chambers G 4733 E and G 2905 I. Similar bead belts are evidently represented in Old Kingdom royal statues and reliefs as in Reisner, *Mycerinus*, pl. 63 g–i and Borchardt, *Sahu-re* II, pl. 18.

[5] It is to be hoped that the full-scale drawings of the tomb of Meresankh III, made by Nicholas Melnikoff, can be published before too long. There are also available for reference in the Boston Museum of Fine Arts the large oil paintings of Joseph Lindon Smith, as well as a number of water-color drawings which I made to record such details as the bottom of the garment of the queen, the basketwork, hieroglyphs, and so forth.

of Hesy-ra's Third Dynasty corridor chapel, particularly in the design on the right of pl. IX in Quibell's *The Tomb of Hesy*.

I should like to suggest that the Hetep-heres beadwork formed part of a garment. It might well have been attached to the upper part of a linen dress. Perhaps it formed a wide border to which beaded shoulder straps were fastened. No evidence remains any longer for these straps, except in the countless tiny ring beads that were recovered from the floor. The garment could, however, have resembled that of Meresankh III, but without the all-over net of cylinder beads which certainly did not exist in the Hetep-heres tomb.

C. THE BOX WITH THE OINTMENT JARS; OTHER VESSELS; THE HEADREST

The little alabaster ointment jars are described in Appendix II, which deals with the stone vessels. There were six cylinder jars and two handled jugs which had been placed in a small wooden box. They were probably supported by a kind of tray with holes as appears in Pl. 34 a. Only shreds of wood were preserved from the box. Its restoration depends entirely upon the fact that it seems impossible that these jars could have fallen as they did (Pl. 34 c) unless they were held together by some such container as is shown restored in Pl. 34 a. The small copper toilet spoon (shown with the ointment vessels in the drawing, Fig. 41, and at the bottom of the photograph in Pl. 40 a) apparently lay originally on the tray beside the ointment jars.

Another small alabaster cylinder jar (No. 1012; Fig. 137) with its lid was found lying under the bent-sided red pottery bowl (No. 34–12–63; Fig. 61; Type C–LXI f) which was partly under the gold sheet of the bottom of the bracelet box. In my restoration of the contents of the chest (Fig. 38) the cylinder jar is placed inside the pottery bowl, while both rest inside the alabaster bowl (No. 775; Fig. 146), which is tipped up against the headrest in the space under the flaring top of the copper basin. It has been suggested at the beginning of this chapter that the alabaster bowl with its contents slid out of the decaying side of the box before the whole collapsed. When the bed leg next fell into the alabaster bowl, it may well have turned over the pottery bowl on top of the cylinder jar. The bracelet box could then have slid down on top of it and the inlaid lid of the outer box then broke up over the whole.

Certainly this extra cylinder jar was never in the small box with the set of ointment jars. It may have been picked up from among the disturbed contents of the first tomb and added to the rather miscellaneous contents of the chest. The little box with the other vessels seems to have stood on top of the well-preserved ewer and basin which overturned as the contents began to slide out of the chest. The details of the copper ewer and basin are shown in the drawings in Fig. 42 and the photographs on Pl. 34.

The large pottery wine jar (No. 34–4–8; Fig. 58) is listed under Type A–II b in the discussion of pottery, Appendix I. To the west of it, in the chest, stood the headrest which must originally have been used with the bed (Pl. 39; Fig. 43). The base of the headrest was 17·2 cm. long and the total height was 20·5 cm. The base had a curved top, being semicircular in section. This and the fluted column were each covered with a sheeting of thin silver before they were fitted together. The curving upper piece which formed the actual rest for the head was covered with two pieces of gold. The top piece was turned down over the under side 2 mm. and fastened with tiny gold nails. The silver of the base was formed of a curving upper sheet, cut out to take the base of the fluted column, and two semicircular end pieces. The silver of the column was pressed over the flutings carved in the wood. The small rectangular block at the top of the column was covered with separate silver sheets on top, sides, and bottom. The top and bottom silver sheets were cut out to take a wooden tenon which extended up from the column, passed through the supporting block and entered the gold-covered, curved upper piece. A similar tenon extended down into a socket in the base, to fasten the column in place.

Mr. Stewart has pointed out that in spite of the beautiful proportions of the headrest it is not exactly symmetrical. The curved support for the head is 3 mm. wider on one side than it is on the other. None of the wood was preserved, but the construction was clearly indicated by the metal covering sheets which lay collapsed close to their original positions (Pl. 39).

D. THE GOLD BRACELET BOX AND ITS CONTENTS; THE TOILET ARTICLES

As can be seen in Fig. 38, the gold-covered bracelet box stood in the southwest corner of the chest with the inlaid lid. Apparently packed in the narrow space between this box and the west side of the chest were the toilet articles: razors, small vessels, and so forth. As has been remarked in Chapter II, the razors were probably originally fitted into a flat case especially made for them as is shown in the wall paintings of the chapel of Hesy-ra. One of the gold vessels, evidently belonging to this set, was found in a box of pottery in the southern part of the tomb, and one of the razors had fallen into the copper basin and was found adhering to the bottom of the copper ewer. These objects were therefore placed loose in the chest, and it would seem likely that they were gathered up from the disarranged contents of the original tomb and placed in the chest for transfer to the new tomb.

The box which contained the queen's silver bracelets (Fig. 44; Pls. 36–38) was covered inside and out (except for the bottom where there was only one sheet of gold) with horizontally ribbed sheets of gold, bordered with mat pattern. It was 41·9 cm. long and 33·7 cm. wide. The height measured 21·8 cm., including the lid. The lid had a small ivory button in the center for lifting it. On each side of this button ran a horizontal inscription in raised hieroglyphs. The portion on the left reads: 'Box containing rings', while that on the right has: 'Mother of the King of Upper and Lower Egypt, Hetep-heres.' Immediately below the right-hand inscription, a scribe has written in black ink: 'Rings', perhaps in the course of checking over the equipment.

Mr. Stewart describes the construction of the box and its restoration in his notes as follows:[6]

> All evidence of construction was obtained from the gold sheets as there was no wood found except the mass of decayed fibers running through the silver anklets, evidently the remains of the thick conical rods on which they were placed.
>
> The gold inner lining of the base board showed pressure marks and change of color, proving that the sides of the box had rested upon it for a distance of 5 mm., that is, half the thickness of the side boards. The base must therefore have been mitred into the sides as shown in the section at A (Fig. 44). The base lining also showed pairs of holes centrally placed on each side and evidently made by pegs driven up from below through the mitre. Pegs must similarly have been used to fix the sides but would have been inserted before the outside of the box was covered and would be hidden by the gold casing. On one of the long sides, the inner lining showed traces of peg holes just on the edge, placed in pairs about 2 cm. from the top.
>
> The lining of the long sides turned in from 2 to 3 mm. at a right angle; that of the short sides turned at a mitre angle of 1 mm. There was a pressure mark 3 mm. from the mitre. This proves a butted mitre joint as shown in the drawing where dotted lines indicate the gold lining at B. The outer gold casing overlaps at the corner and was therefore put on after the box was lined with gold and assembled.
>
> The lining of the cover showed the positions of the two battens, and their curved section was evident from the form taken by the gold covers of the battens themselves after straightening out bulges in the metal. This was afterwards confirmed by the finding of the batten ends which exactly coincided with the supposed section and had an overlap which fitted on to a patina mark on the batten covering. Two of the gold tubes, T, T on the drawing, were actually found in position and the remaining two were found in positions which indicated that they had fallen out from corresponding holes on the other side.
>
> The decayed wood found inside the anklets indicated tapering rods tongued into flat disks. The disks themselves showed by the evidence of the gold that the smaller ones were removable on a square tenon and that the larger ones at the north end of

---

[6] The word 'anklet' has been allowed to stand in this quotation, although it is now believed that the rings are bracelets.

the box had been fixed to the rods. Only the edge of the large disk B and that part of the inner surface extending beyond the diameter of the rod C had been covered with gold. The outer side, which was the base when the rods were set upright to place on or remove the anklets, was not covered with gold.

The lining of the bottom of the box shows peg holes which must have been attachments of some interior fitting but we have no direct evidence of this. The holes and pressure marks on the gold indicate a board or support running across the box at the south or right end at 2 cm. from the end and fixed by these pegs, 4 mm. in diameter, driven up from underneath. The holes at the left end are arranged in two rows. One at 7 cm. from the end had four pegs, the second at 8·5 cm. from the end had three holes. These are indicated by black spots on the drawing of the bottom lining. We can only surmise what form of support was used to keep the tapered rods in place or what was the purpose of the four gold tubes inserted in the long sides of the box at 2·5 cm. from the top. Our reconstruction of the support for the rods was therefore designed to agree with the peg holes in the bottom of the box, the diameter of the large ends of the rods and the square tenons of the smaller ends. The large space between the support and the left end of the box is more than enough to enable the hand to be inserted and lift out the rods by their large ends. Possibly other toilet articles were packed in this space such as the gold blades which were discovered some little distance away.

There must have been some method of fixing the rods in place to prevent them from moving when the box was carried about but there was no evidence to guide us in reconstructing this. The ivory button handle on the top of the box was intact but in such a decayed condition that a new one had to be made. The length of its tenon agreed exactly with the thickness of the box top plus the thickness of the ivory disk so that there was no possibility of fixing it in place by means of a transverse pin under the lid. It was probably fixed by some adhesive and we have so fixed the new one. The lining of the lid was pierced by a narrow hole agreeing with the size of the ivory tenon.

Most of the gold sheets showed traces of gesso under the rill pattern. In replacing them on the reconstructed box, we used a paste of plastic wood and necol. When the gold had been pressed down on to this by means of a felt pad, it was left until the paste was half dry when the sunk lines were run over with a wheel lining tool specially made to fit the width of the lines.

The box originally contained two rows of ten silver rings, but a number of them were too badly decayed to be replaced and only parts of six appear on the second cylinder in the photograph on Pl. 38. Some fragmentary material was graciously presented to the Expedition by the Egyptian Department of Antiquities in 1947 and is now in the Boston Museum of Fine Arts. A reproduction of a complete bracelet is being prepared for exhibition in Boston on the basis of this silver and the accompanying inlays. Except for a selection of pottery types which were allotted to the Expedition in 1939 and which are now in Boston, all other objects from the Hetep-heres tomb are now in the Cairo Museum. The rings were originally termed anklets by Dr. Reisner, and their inlaid designs were thought to represent dragonflies. However, it has been pointed out in my *History of Egyptian Sculpture and Painting in the Old Kingdom*, p. 146, that it is more likely that they are bracelets, while Louis Keimer established that the designs really represent butterflies. The size of the rings supports the evidence from Old Kingdom reliefs that these were worn on the forearm. Keimer has reproduced in color the butterfly design and commented upon their identification in an article, 'Pendeloques en forme d'Insectes', *Annales du Service*, 34 (1934), p. 194, pl. XV. The rings are hollow shells of thin metal and are graded in diameter from 9 cm. to 11 cm. (6·8 to 7·7 cm. on the inside). The metal was analysed for Mr. Lucas by Dr. H. E. Cox of London and found to consist of 90·1 per cent of silver, 8·9 per cent gold, and 1·0 per cent copper.[7]

The inlays of the bracelets are of carnelian, turquoise (ranging in color from sky blue to a greenish tone), and lapis lazuli. Mr. Lucas found that the lapis lazuli had in a few places been eked out with plaster or cement painted a dark blue to match the stone. The body of the insect and the bands on the wings are lapis lazuli, the head and wider bands on the wings are turquoise, while the tail is carnelian, as are the small round disks which are placed in the spaces between the four butterflies (see Pl. 38).

The smaller toilet articles were found under the gold lining of the bottom of the bracelet box and to the east of it where several of them had worked themselves slightly under the edge of the alabaster sarcophagus. They can be seen in position in Pls. 40 d and 41 c. One of the most interesting of these objects was the silver boat-shaped receptacle, the nature of which remains uncertain. Mr. Lucas found it impossible to consolidate since no core of metal remained (No. 1105; Pl. 41 d; Fig. 45). There were also three little gold dishes, two badly decayed ivory bracelets, a copper needle, a gold manicuring implement, and thirteen copper and gold razors of two different types. The silver vessel (No. 1105) was perhaps some sort of a container for cosmetics. It also appears on the plan of the chest in Fig. 38. It was 13·5 cm. long and tapered from its greatest width of 3·3 cm. to 2·3 cm. at one end. Two little gold dishes (Nos. 1146, 1149) were identical, with a diameter at the rim of 8 cm. (Fig. 45; Pl. 40 b). With them should be considered the little spouted cup (No. 1084), which was found in a box of pottery in the southern part of the tomb, since this originally seems to have formed part of a set of three (Pl. 40 b; Fig. 45). It had a maximum diameter, with its spout, of 10·5 cm. There was also one small dish of alabaster in the chest with the inlaid lid, not yet mentioned. It had a rim diameter of 8 cm. (No. 1153) and is listed in Appendix II with the other stone vessels under Type OK X (Fig. 45).

---

[7] See the discussion of the silver from the Hetep-heres tomb in A. Lucas, *Ancient Egyptian Materials and Industries*, 3rd ed. (1948), pp. 279 ff.; also 2nd ed. (1934), pp. 204 ff.; also the important study of the occurrence and use of silver in ancient times by R. J. Forbes, 'Silver and Lead in Antiquity', *Ex Oriente Lux, Jaarbericht*, no. 7 (1940), pp. 489–516.

The two ivory bracelets (No. 1106; Fig. 45; Pl. 41 a) were approximately 6·6 cm. in diameter and had a thickness of 1·1 cm. They were broken in several pieces and the ivory was in a very fragile condition. The tiny copper needle (No. 1116; Fig. 45; Pl. 40 a) curved up at the end and was about 4 cm. long. A second small gold implement (No. 1117; Fig. 45; Pl. 40 c) was apparently intended for cleaning the nails. It was 7 cm. long and 0·18 cm. thick. The razors were of two types. In one case the blade was in the form of a rectangular piece of metal with the sides beveled down from a thick center to a sharp edge. The four copper examples of this type (Nos. 751, 1112, 1113, 1152) are shown in Fig. 45 and Pl. 40 a. The three gold blades (Nos. 1151, 1159, 1161) are illustrated in Pl. 40 c and in Fig. 45. The gold blades measured 5·7 by 2·8 cm., while the copper examples were a little larger, ranging from 6·3 to 6·7 cm. in length and having a width of 3·3 cm. The maximum thickness was 3 mm.

The second type of razor consisted of a flat blade with rounded end, fastened by means of a projecting tang to a wooden handle. The wood was partially preserved in the case of one of the gold razors (No. 1149) and on three of the copper examples (Nos. 1111, 1147, 1148). The probable restoration of the shape of the handle is indicated in Fig. 45. They closely resemble the razors set in a flat case in the wall painting of the Third Dynasty chapel of Hesy-ra (J. E. Quibell, *The Tomb of Hesy*, pl. XXI). The two gold razors (Nos. 1120, 1149) are shown in Pl. 40 c and Fig. 45. The five copper pieces (Nos. 1110, 1150, 1147, 1111, 1148) appear on Pl. 40 a and Fig. 45. The gold blades were 8 cm. long. The copper blades range in length from 8·5 to 10·6 cm. The thickness varies from 0·3 to 0·75 cm. In addition to these, there was also a plain rectangular piece of copper (No. 1121; Pl. 40 a; Fig. 45).

With these razors should also be considered a group of flint blades which were found scattered over the southern area of the tomb. They had originally been placed in several of the boxes of linen and pottery. There were thirteen long flints (10 cm. or a little longer) with rounded ends (Pl. 41 e). Nine flints were rectangular in shape (6 to 7 cm. long). These are shown on Pl. 41 f.

E. THE CASE WITH THE WALKING-STICKS

In the area west of the chest there was one other confusing group of fragments of gold and inlays. It can be suggested that these composed a tubular leather case which had metal-covered disks at top and bottom. According to the reconstruction in Fig. 46, this would have contained two long staves covered with ribbed gold casing and a third wooden stick inlaid with a pattern of Min emblems. In Fig. 19 and Pl. 33 the much torn metal disks can be seen lying against the easternmost of the palm capitals from the rear poles of the carrying-chair. The gold ribbed casing of the two staves lay along the western face of the collapsed bracelet box (Pls. 33 b, 36 b). In Pl. 33 a are photographed the metal disks and the gold casing of the walking-sticks. The gold ribbed covering of the latter, although in many pieces, could be assembled for a length of 102 cm. for each staff because of the gradual increase in diameter from the bottom (1·7 cm.) to the top (3·5 cm.). The disks were in pairs, respectively 11·5 cm. and 14·5 cm. in diameter. The smaller pair (Nos. 537, 544) was composed of a dark patinated metal in very brittle condition, either silver or electrum. These sheets enclosed a decayed disk covered with plaster (No. 540). The face of the upper sheet (No. 537) still preserved traces of inscription in relief, reading: 'Mother of the King of Upper and Lower Egypt, [Follower of] Horus, Hetep-[heres]. . . .'[8]

The smaller pair of silver sheets lay on top of two bright gold sheets (Nos. 545, 546) which also enclosed a disk of decayed wood. Lying to the west of these, directly on the floor and underneath all remains of the second armchair, the bed, and carrying-chair, were parts of an inlaid wooden staff. The scanty remains of the staff were oval in section, with a width of 2·5 cm. and a thickness of 0·8 cm. One strip of this inlaid wood can be seen in the lower right corner of Pl. 32 b. Although the design employed Min emblems, as did that of the inlaid lid of the chest, it differed in that these emblems were separated by three small vertical inlays. Like the chest, the center of each Min emblem was formed of a carnelian disk. The design ran vertically up the staff when it stood upright since in such a narrow space the shape of the Min emblems necessitates a design composed in a horizontal band which could only be viewed as such if the staff were laid down on its side (Fig. 46). Four of the elements of this design (No. 513; lying face up over four elements face down) ran in a curving north–south line under the gold covering of the north end of the bed, just east of the western of the two palm capitals of the rear end of the carrying-chair poles. One (No. 950 with the same pattern on the other side) also lay under this same gold sheet. Another (No. 536), set in shriveled wood but with no pattern on the back, was mixed with the box-lid inlays beside the eastern of the two palm capitals. Two more elements set in wood and with the same pattern on the other side (No. 904) came from an area near the northern end of the gold sheet covering the east side of the bed frame. They were at the southwest corner of the collapsed gold bracelet box and mixed with the beadwork (some of which was given the same number). These add up to eight elements (fifteen in all, counting both faces of the staff) which could be certainly identified, one (No. 536) having preserved no design on the other side. They indicate that the staff had rolled under the northern end of the bed, perhaps already broken into several pieces, before the final collapse of the bed.

One other small fragment had part of this same design, the end of one Min emblem and two vertical inlays set in decayed material which was almost certainly leather. In this case the design seems to have been placed horizontally. The fragment was found about 40 cm. north of the metal disks among the wooden fibers of the decayed floor boards of the bed. It has been restored in Fig. 46 as part of the leather band which ran around the silver-covered wooden disk to form a cap for the case. It suggests that the case itself was made of leather which has completely decayed. A considerable number of the Min emblems were found with no indication of whether they had been accompanied by the three vertical separating inlays of the staff design. There were enough of these to fill in the missing elements in the patterns of the inlaid lid of the chest, as well as to provide five more Min emblems to finish out the walking-stick to the same length as the gold-covered sticks. There would also have been enough to complete the design that circled the leather cap of the case for the walking-sticks.

---

[8] A third gold disk (No. 538), also measuring 11·5 cm., lay on top of the pile a little north of No. 537 (Pl. 33 b). It had traces of wood under it but not preserving any shape as in the case of the wooden disk under No. 537. Nor was there a second metal sheet as in the pairs 537, 544, and 545, 546. I am at a loss to suggest how it could be combined with the other two metal sheets 537 and 544 which are of the same size, even after examining the material again in July 1951. It might just be conceivable that there was a double covering of metal on the under side of the lid of the case and that 538 was laid over 544, pulling loose to fall a little north of the pile of debris as the case decayed, but this does not seem very likely. In Pl. 33 a it is Nos. 538 and 544 which are photographed lying beside 545 and 546. No. 537 was in too fragile a condition by that time to be photographed.

¶ In preparing the above text, I had overlooked the fact that W. B. Emery, in *The Tomb of Hemaka, Excavations at Saqqara* (1938), fig. 12 and p. 41, no. 435, illustrates a large cylindrical leather bag with wooden fittings which contained wooden staves. This First Dynasty example was 1 m. high and 15 cm. in diameter.

I have already anticipated in Chapter II the conclusion that the two gold-covered sticks and the inlaid staff were standing in a leather case which had been placed leaning against the east side of the bed and the back of the carrying-chair (Fig. 20). One must presume that the leather had decayed more quickly than the wood of the furniture, allowing the staves to fall out. The inscribed silver-covered lid of the case fell on top of the gold-covered disk which formed the bottom of the case. In the drawing in Fig. 46, I have assumed that the cover of the case had a band of leather attached to the silver-covered wooden disk and that the leather was inlaid with Min emblems separated by vertical inlays. A small piece of this leather cap (No. 574) fell, or was blown by an air current created by the collapse of the other pieces of furniture, some 40 cm. to the north of the other parts. It probably rested on the decaying woodwork of the bed or the carrying-chair until this subsided to the floor of the tomb.

VI

THE MUD SEAL-IMPRESSIONS

IN the preceding text, mention has been made a number of times of the fact that articles of the equipment of Queen Hetep-heres I were sealed with the name of Cheops for deposit in her original tomb. In G 7000 X, a few inscribed mud fragments (No. 1706) were found in the debris at the very bottom of the pit (Pl. 43 c). All the other fragments of sealings were in the decayed wooden boxes containing the broken equipment and the litter swept up from the floor of the plundered chamber and redeposited in the new tomb. All bore variously preserved impressions of the same seal bearing the name of Cheops. None bore the name of Sneferu, and no sealed equipment was prepared before the death of the queen in spite of the fact that her household furniture was made for her partly by Sneferu and partly by Cheops. All the evidence proves that the queen died in the reign of her son Cheops, and the sealed equipment deposited in her tomb bore the mark of the mortuary establishment of her son. No sealings were found in connection with the food offerings placed in the niche part way down the shaft. Only one mud sealing was found in its original position. This was in the middle of the lid of the alabaster canopic chest and traces of string showed that it covered the knot in this string which had passed around the chest in two directions. Although the seal was covered by a little perforated pottery lid (No. 34-4-42; Fig. 78), the mud had badly disintegrated and no impression was preserved on the sealing (Pl. 44).

The most complete fragments of the impressions, which belonged to about ten sealings, are illustrated in Fig. 47, where a reconstruction of the inscription as far as preserved is included in the upper left corner. All the impressions were made on box seals, except one (No. 1172:26) which was on a fragment of a jar sealing. The complete box sealing was a domed piece of mud over which the cylinder seal had been rolled, sometimes a number of times. The base shows a flat surface with traces of the imprint of wood graining where it had rested on the lid of a wooden box and also the marks of the crossed string which had passed around the box in two directions to tie the lid fast.

The inscription was of the usual six-line type with three lines repeating the Horus name (*Ḥr Mḏdw*) of Cheops facing to the left and the intervening lines bearing titles of the sealer, with the signs facing to the right. Two of the lines still remain incomplete after a long study of all the fragments. There seems to be nothing quite comparable to assist in the reading of them. We shall find the same difficulty in attempting to deal with the inscriptions on the much less well-preserved seal impressions from the Giza mastabas. The number of seal impressions which have been published in drawings or photographs is still very limited, and although a number of Old Kingdom cylinder seals are known in museum collections, no extensive study has as yet been devoted to them. The very important contribution to the interpretation of this difficult material which Professor Junker has made in translating the inscriptions on several impressions found in his excavations at Giza (*Giza*, VII, 1944, pp. 231–240) indicates what may yet be done with material which is at present insufficiently known.

In the Hetep-heres inscription the three lines of titles mention the *wꜥbt*, which evidently means the mortuary service of Cheops, that is, a workshop which had as its chief function the embalming of the body. In the inscription on the façade of the rock-cut tomb of Queen Meresankh III (G 7530–7540) we have a clear statement of the date of the death of the queen when 'her *kꜣ* was at rest and she proceeded to the *wꜥbt*', balanced on the other side of the entrance to the tomb by a statement of the date on which the queen proceeded to her beautiful tomb.[1] The building of the *wꜥbt* is schematically rendered and labelled in the Sixth Dynasty tomb of Qa'ar at Giza, where it is shown as a separate entity from another structure concerned with the funeral, the *ỉbw*,[2] which has been mentioned in Chapter II in connection with the fragments of a canopy found in the Hetep-heres pit. The place of embalming is represented in other funeral scenes of Dynasty VI, being especially well preserved at Meir where the name is again given.[3]

The inscription on the Hetep-heres seal seems to indicate various aspects of the services of the *wꜥbt*, although it must be confessed that these are far from clear, especially since two of the lines are incomplete. The first line on the right is probably to be interpreted: 'Sealer of gold of the Embalming House of the King of Upper and Lower Egypt'. This may mean the one who holds the gold seal of Cheops rather than the official who seals the gold objects, but it could be argued that the mortuary establishment, in addition to being the place of embalming, also contained storerooms for the equipment as well as workshops for making the equipment. In this case the gold objects would be in need of particular care in sealing them away from theft. On the whole, one is inclined to believe that Cheops's official bore a gold seal, of which we have here an actual series of impressions, and that this served to stamp all storage rooms and objects in connection with the king's mortuary establishment.

The second line is broken but may consist of something like: '[The Keeper] of the gates of the Embalming House', while the third broken line may read: 'He who is versed in the secrets of the Embalming House.' The shape of the bird above the word *sštꜣ* ('secrets') is uncertain in the several places where it occurs. If it were *wr*, one might read: 'Great One of the secrets of the Embalming House', but this seems doubtful and something is missing above the bird. If the bird is the last letter of the word *sštꜣ*, it should not be written above it. On the whole, though, the familiar title *ḥry sštꜣ* seems the most plausible until further evidence is forthcoming. The word *wꜥbt* appears once again on a sealing of King Isesy, the next to last king of Dynasty V, which was found in the Mycerinus Pyramid Temple (Fig. 56). Here it is apparently combined with the 'Gold' name of Isesy, *Nb-Ḥr-ḏd*. In this case the breaks preclude certainty but there is a possibility that we have here a title similar to that on the Hetep-heres seals: '[Sealer] of the Embalming House of *Nb-Ḥr-ḏd*'.

In view of the important bearing which the sealings of Hetep-heres have for the study of Old Kingdom cylinder seals, it has been thought useful to include here the other inscribed seal impressions recovered by the Harvard-Boston Expedition at Giza. A list of the legible sealings is given below in the order of the kings whose names occur on them. In all but a few cases it has been possible to examine them again and to make new drawings (Figs. 48–57). Occasionally it has been necessary to fall back on the original hand copies made in the Expedition object-registers. It is impossible to determine whether some of the small fragments were from box or jar sealings, but it will be seen that a great many of the examples were box sealings. As is more or less to be expected, no letter seals were found in the burial chambers, although Junker found one with the imprint of papyrus on its back in the surface debris of the Western Cemetery (inscribed with name of Ne-user-ra; *Giza*, VII, p. 239, fig. 98). In most cases the impressions are faint and frequently superimposed upon one another. Wherever possible, a drawing of the inscription has been placed beside the fragmentary traces of the different impressions. In no case has it been possible to restore completely the original inscription. The interpretation of the titles must remain tentative. Sometimes they are almost completely illegible.

---

[1] G. A. Reisner, *Bulletin of the Museum of Fine Arts*, 25 (1927), 74.

[2] Smith, *A History* . . . fig. 84 a.

[3] B. Grdseloff, *Das Ägyptische Reinigungszelt* (Cairo, 1941), p. 14; H. Ricke, *Bemerkungen zur Ägyptischen Baukunst des Alten Reichs*, II (*Beiträge*, &c., 5, 1950), 96–97; E. Lüddeckens, *Mitteilungen des Deutschen Instituts*, Kairo, 11 (1943), 2–5.

G 2130 A: Cheops; jar sealing, 32–12–6, with impression of rim of jar. In Fig. 48 it is possible to give a somewhat better facsimile than was first presented in *Vol. I*, fig. 249 a, but without being able to suggest the meaning of the signs outside the Horus frame. Only the *w* of the Horus name of Cheops, *Ḥr-mḏdw*, is preserved. The tomb is one of the early mastabas. All its features, including the very fine low reliefs in the chapel, point to a Dynasty IV date. The Horus name of Cheops is the only one ending in *w* in Dynasty IV. The rather complicated paneling of the base of the Horus frame seems to be characteristic of the earlier seals, resembling the Hetep-heres example rather than the later, more simple form. The owner of the tomb was a prince named Khent-ka.

G 4430 A: Chephren; one nearly complete jar sealing and fragments of perhaps two other jar sealings with several impressions of the same cylinder; also a small fragment of a jar sealing with an impression from a different seal; all numbered 13–12–4 (see Fig. 49). The back of the large fragment shows the imprint of cloth that was tied over the mouth of the jar before the mud was applied. The first cylinder had a six-line inscription with three frames containing the Horus name of Chephren, *Wśr-ỉb*, facing left. Under these frames are figures of the king. Three lines of titles, facing right, are placed in the intervening spaces between the frames. They are not of a funerary character but the titles of a great official as in the case of a silver cylinder seal of a courtier of Chephren from the Mycerinus Valley Temple (MFA No. 11.962; Reisner, *Mycerinus*, p. 234, pl. A). The first column on the right reads: '. . . King's descendant, honored before . . .'; the second: 'Overseer of all the Works of the Eastern [? Districts]'; while the third has: 'He who is versed in all the secrets of the Eastern Desert (and). . . .'. The third line seems to end with two falcons followed by two land-signs, although one would like to see here 'Western Desert' to balance the 'Eastern Desert'.

The second seal has the cartouche of Chephren alternating with his Horus name, while the titles seem again to belong to a man who was in charge of the administration of the country. It has been possible to see a little more on this, as well as the other impressions, than was recorded in *Vol. I*, p. 487, fig. 295 and pl. 62 d.

The name of the owner of the tomb was not recovered. The mastaba is one of the early tombs in Cemetery G 4000.

G 1457 A: Mycerinus; part of a jar seal and a small fragment of a box (?) seal; 34–12–28. These were found with several uninscribed jar sealings, 34–12–11–14 (see Fig. 50). The smaller of the two fragments is made of fine hard clay and bears what seems to be a string mark (or fiber marks) on its back, but it is too small to be certain that it is a box seal. The marks might indicate the tying of cloth over the mouth of a jar. It bears part of the Horus name of Mycerinus, Kay-[khet], and the figure of Anubis over his shrine. It therefore belongs to the type of seal used by an official of the mortuary service, which would seem to swing the balance in favor of this being a box seal used on a canopic chest. There was a canopic pit in the chamber intended to take some sort of receptacle for the canopic packages. No stone canopic jars were recovered, but there were fragments of wood which might have formed part of a canopic chest, since they did not belong to the wooden coffin.

The fragment of the jar sealing bears part of the cartouche of Mycerinus and his name, Kay-khet, set in a Horus frame.

The owner of the tomb, Nefert-nesut, was Overseer of the Pyramid town of Akhet-Khufu. He was also Overseer of the Mortuary Establishment (*wꜥbt*) of the King (a title not included in the list given on p. 210 of *Vol. I*).

The tomb is one of three large mastabas (G 1457, 1407, and Junker's tomb of *Ḥśf* II) which are placed at an angle to the old nucleus cemetery 1200 (cf. Map of Western Cemetery in *Vol. I*). In spite of

Junker's doubts (*Giza*, IX, 1950, pp. 248 ff.), it seems most probable that the large tombs G 1457 and G 1407 form part of the earliest addition to Cemetery 1200 and are to be dated to the reign of Mycerinus. In the brick chapel of G 1457, the upper part of the false-door and the drum of the entrance are of stone carved with relief in early style (Reisner, *Bulletin of the Museum of Fine Arts*, 33, 1935, pp. 69–77).

G 5190 A (old number G 2300): Mycerinus; one box sealing of fine mud with marks of knot and string on base; 12–10–21 (see Fig. 50). Several impressions of same cylinder seal. The inscription is in the usual six lines, with three frames containing the Horus name of Mycerinus, Kay-khet. These face to the left. There are three lines of partially preserved inscription with the signs facing to right, giving titles. The first line on the right seems to contain the title discussed by Junker in *Giza*, VII, 1944, p. 233, where it occurs on a sealing of Sahura and which he reads: 'The Lector Priest, He who reads the secret words of the sacred writing.' In our sealing there seems to be an *ś* instead of the papyrus roll and no space for the *n* or the falcon on the standard in the phrase 'of the sacred writing'. There seems no choice but to record what can be seen in spite of the bad condition of the impression, leaving doubtful the end of the title.

In the second line, nothing is preserved except: 'King of Upper and Lower Egypt Men-[kaw]-ra. . . .'. The third line has only the sign for 'scribe' followed by a papyrus roll. These traces are sufficient to show that the inscription does not duplicate the Junker seal impression (from the tomb of Zaty, G 5370).

G 5190 is the northernmost core of the third and easternmost line of the Echelon Cemetery. Reisner believed these cores were all built in the reign of Mycerinus (*Vol. I*, pp. 81–82). There is no reason why the owner of G 5190 should not have been buried in this reign.

Mycerinus Pyramid Temple: Mycerinus; one badly preserved seal of unidentified type; 07–1–83 (see Fig. 56). Impression of king's name in cartouche (Reisner, *Mycerinus*, p. 19).

G 5080 B (old number G 2200): Shepseskaf; one inscribed jar seal, 33–2–223, and one box seal with figures of bound prisoners, 33–2–151 (see Figs. 50, 51). There is little to be said about the badly preserved jar seal except that it contains several impressions of the frame with the Horus name of Shepseskaf, Shepsesy-khet. The box seal has, above, a standing figure of a jackal and, below, two or three lines of headless, bound prisoners. A comparable sealing is illustrated with this on Fig. 51. Unfortunately, its finding place at Giza is no longer known.

G 5080 was the tomb of a man named Seshem-nofer, a member of a well-known family at Giza. The core of the mastaba was built in the first, or westernmost, row of the Echelon Cemetery. The fine granite head of this man in Boston supports the other evidence that this tomb was completed at the end of Dynasty IV (Smith, *A History* . . . pp. 52 ff.).

G 4631 B: Weserkaf; one box seal, complete with impression of knot and string; 14–1–34 (see Fig. 53). Long study of the superimposed impressions here suggests that there was an unusual arrangement of eight lines of inscription as shown at the bottom of Fig. 53. There were four frames with the Horus name of Weserkaf, Ir-ma'at, facing left, and four columns of titles facing right. Underneath were two horizontal lines of inscription, the upper with the signs facing left and the lower with the signs facing right. Very little remains of these, but the lower line may contain the name of Weserkaf's Pyramid: [Wʿb-]*ỉswt*. The scanty traces of the vertical lines of titles all seem to be concerned with the cult of Anubis and, therefore, the mortuary service. There are unmistakable parts of a rare title in the second line, which also may appear in the first line. This is 'Priest of Horus and Anubis, Foremost of the House of the *Šmśwt*'. This has been discussed by Kees in von Bissing, *Das Re-Heiligtum*, III (1928), pp. 26–27. The title occurs at Saqqara in Mariette, *Mastabas*, D 38, 47, and 49, and in Steindorff, *Das Grab* *des Ti*, von Siegelin Expedition, vol. II (1913), pl. 27. The closest parallel to the sign in column two of our seal is in a Sixth Dynasty tomb (Jéquier, *Annales du Service*, 26, 1926, p. 54).

In the second line of the inscription is preserved: '. . . *šmśwt ḥm nṯr*'. In the third line it is difficult to suggest the meaning of what remains. In line 4 there appears to be: '. . . *Ḥr ’Inpw tp ḏw-f* . . .'. It is possible that line 1 reads: '. . . [*’Inpw tp ḏw*]*-f ḫnt pr* [*šmśwt*]'.

It is impossible to be certain, in view of the poor state of the surface of the mud, but it may be that the epithets of Anubis, 'He who is upon his mountain' and 'Foremost of the House of the *šmśwt*' might be alternated in the titles of a man who was priest of Horus and Anubis. One can only be certain that a part of the rare epithet appears in the second line and that Anubis is given his ordinary epithet once.

G 4631 is a mastaba built against the early core G 4630. Its mud brick facing forms a corridor continuing north from the chapel of G 4630 and seems to have been built at the same time that a man named Ankh-ir-s erected a stela for his father Meduw-nefer in the chapel of G 4630 and had himself represented on the stela of a lady named Nen-sezer-ka in the corridor of G 4631 (*Vol. I*, pp. 491–495, pl. 61 f.). Ankh-ir-s, who seems to have been responsible for the burial of these members of his family, bears the titles of Lector Priest and Priest of Anubis. It would seem likely that he was also the bearer of the seal of which the impression was found in G 4631 B.

G 4520 A: Weserkaf; one box sealing, impressed with a cylinder seal bearing the Horus name of Weserkaf, Ir-ma'at; 14–4–20 (see Fig. 54). The mastaba was one of the later cores in the nucleus cemetery 4000. It belonged to a man named Khufu-ankh, who claims on his stela that it was prepared in the presence of the king, therefore, presumably Weserkaf. The burial was intact (*Vol. I*, pp. 503 ff.).

G 4410 A: Weserkaf; two fragments of a box sealing with string marks attached; 15–12–49 (see Fig. 54). The only portion legible contained the Horus name of Weserkaf, Ir-ma'at, written in a horizontal frame, as in the case of the name of a building or property.

The mastaba is one of the later structures in the nucleus cemetery 4000. The name of the owner was not recovered (*Vol. I*, p. 514). The statuettes found walled up in a corner of the offering room seem to have belonged to funerary priests or descendants of the owner. One of them bore a name compounded with that of the Fifth Dynasty king, Isy. The chief *serdab* of the tomb was empty.

G 7663 A: Sahura; one fragmentary box seal; 29–4–336 (Fig. 55). Several superimposed impressions make the inscription very difficult to interpret, but there are clear traces of the Horus name of Sahura, Neb-khaw, and his 'Gold' name, *Ḥrwy-nb*. The two crowns in the middle of the line of titles suggest the similar occurrence on the Chephren silver cylinder seal (*Mycerinus*, pl. A).

The tomb was subsidiary to the large mastaba of Ka-m-sekhem (G 7660 or Lepsius 59) in the Eastern Field. The mastaba was destroyed and the name of the owner not recovered. There is no reason why it could not have belonged to the time of Sahura.

G 4715 B: Sahura (?) and Ne-user-ra; one sealing from the lid of a cylinder jar with several superimposed impressions which were recorded with some doubt in the Expedition record as containing the names of two kings; 15–12–19. In Fig. 54, the signs which constitute the Horus and cartouche names of Sahura are doubtful and cannot be checked. The name of Ne-user-ra is placed in a horizontal rectangle, as in the case of the name of Weserkaf from G 4410 A. The word *śbꜣtw* resembles the word interpreted 'gates' on the Hetep-heres seal, as well as that rendered by Junker 'zögling' (*śbꜣyt*). It is only certain that the name of Ne-user-ra appears on this sealing.

The mastaba is incorporated within the chapel of the small tomb of the Princess Nefer-hetep-s (G 4714), who has been presumed to be related to the Queen Ny-ma'at-hap of G 4712. The identification of these ladies buried in minor tombs along the southern edge of the Western Cemetery has not been solved. They may well have lived in the reign of Ne-user-ra, however, being somehow connected with the Fourth Dynasty royal family buried at Giza. The name of the person buried in the pit G 4715 B has not survived.

G 7112 A: Ne-user-ra; one box sealing with marks of knot and string; 25–1–963 (see Fig. 52). The arrangement of the inscriptions on this seal resembles that on the seal impressions from G 4631 B. In this case there were probably only six vertical lines and two horizontal lines below. The surface is badly preserved, and it is not possible to suggest the correct placing of all the signs that occur in the different rollings from the same cylinder. The Horus name of Ne-user-ra, Iset-ib-tawy, is clear. The title on the left appears to read: 'He who sees Anubis, He who is versed in the secrets. . . .' Below, there is certainly the title: 'Priest of Anubis who is upon his shrine'.

Again we apparently have titles related to the mortuary establishment and therefore probably the seal of a wooden canopic chest. In fact, it is more than a probability in this case since the box sealing was found in the debris of a wooden chest.

The pit G 7112 A lies in the street east of the mastaba of the Crown Prince Ka-wab, a little north of the chapel of his wife, Hetep-heres (G 7110). No superstructure of the tomb has survived nor was the name of the owner recovered.

G 7249 A: Ne-user-ra; one box sealing found with canopic jars on the lid of the coffin and probably from a canopic chest; 27–2–247 a (see Fig. 54). Only the frame with the Horus name of Ne-user-ra, Iset-ib-[tawy] is clear. The tomb is a small subsidiary mastaba in the area south of G 7240.

G 4721 A: Isesy (?); one badly impressed box sealing; 14–2–16 (see Fig. 57). The Horus name might be read Nefer-[khaw] instead of Zed-[khaw]. The titles cannot be read except for that of 'Lector Priest'. The mastaba was attached to the southern end of G 4730. The owner's name was not recovered.

G 4733 E: Isesy; one box sealing with string marks on base and several impressions of the same seal; 14–2–17 (see Fig. 57). There is evidently a wide spacing between two frames with the Horus name Zed-khaw. There is a horizontal inscription across the base with the king's cartouche name [Zed]-ka-[ra]. Although the inscription is fairly well preserved, it is only possible to suggest that the titles of the owner are concerned with the service of Anubis. That they are connected with the mortuary service is clear since the sealing came from the debris of a chest which had contained four canopic jars.

The tomb is fairly large, occupying the street between G 4730 and G 4830. The name of the owner was not recovered. One Isesy sealing (07–1–82) comes from the Mycerinus Temple (Fig. 56).

Mycerinus Pyramid Temple: Tety (?). In *Mycerinus*, p. 19, Dr. Reisner suggested that these two fragments contained the Horus name of Tety, Sehetep-[tawy]. There appear to have been two Horus hawks standing facing each other on top of a wide frame. See Fig. 56.

G 2375 A: Mernera or Pepy II; one partially preserved box sealing; 13–1–529 (see Fig. 57). The Horus name is only partially preserved. Reisner restored it as that of Isesy (*Ḏd-ḫꜣw*) or possibly Nefer-f-ra (*Nfr-ḫꜣw*). However, the first sign must have been written on the left and not above the other two, and this is more usual in writing the name of Mernera (*ʿnḫ-ḫꜣw*) or Pepy II (*Nṯr-ḫꜣw*).

The title 'Assistant Embalmer' (*śḥḏ wt*) is given three times. Apparently the horizontal inscription reads: 'The Assistant Embalmer, He who is versed in the secrets of Anubis. . . .'

The owner of the mastaba is named Akhet-mehu. The tomb is on an independent site north of that of Senezem-ib Yenty (G 2370), the Vizier of Isesy. When the tomb of Khnumenty (G 2374) was added between those of Yenty (G 2370) and his son, Mehy (G 2378), the construction included the southern end of G 2375. Mehy succeeded his father in the vizierate under Unas. Khnumenty, who was probably a second son of Yenty, possessed estates compounded with the names of Unas and Tety. He was also buried with a stone bowl inscribed with the name of Tety (see Pl. 45 c; Fig. 147) if we are correct in assigning the chamber G 2385 A to him. It is therefore probable that the tomb of Akhet-mehu (G 2375) was not as early as Reisner thought and that he was buried either in the short reign of Mernera or early in the reign of Pepy II. The sealing would seem to bear the name of one of those two kings.

G 2381 A: Pepy II; one domed jar sealing still in place on the two-handled vase shown in Pl. 52 g; 12–12–571. The surface was badly preserved, and only the two names of the king are clear in the four-line inscription: 'King of Upper and Lower Egypt, Pepy' and his Horus name, Neter-khaw. The owner of the tomb is a well-known official of Pepy II who appears in the reliefs of that king's funerary temple as well as in an inscription at the Hamamat stone quarries. This man Impy, like his father, Nekhebu, was also called Mer-Ptah-ankh-mery-ra. See Fig. 54.

Street 7300, between G 7340 and G 7440; one sealing was found in the debris which bore no name of a king. Although it did not have the imprint of papyrus, the peculiar method of fastening it to the strings, its small size and shape, and the fact that it seems to have been dropped in the street suggest that it may have been a letter or document seal; 27–3–500 (see Fig. 54). The drawing is taken from the Expedition object-register, and it has not been possible to check this with the original. The *r* under the name of Hathor should probably be corrected to *d* to read: *dwꜣ Ḥt-ḥr*, a title recorded in P. Newberry, *Scarabs* (1908), pl. V, 6. If this is a female worshipper of Hathor, then a *t* has been omitted in *sꜣ*[*t*] *nśwt n*[*t*] *ẖt·f*, if the title is to be read 'Princess, Worshipper of Hathor'. Whether the figure on the right represents Hathor or the owner is uncertain. One could perhaps restore a name: 'Prince Duwa-[n]-Hathor', but this seems doubtful, especially since we have found no personal names on any of the sealings listed here, save those of the king.

It will be observed in the above list of sealings from Giza that, as in the case of the alabaster chest of Hetep-heres, there is evidence that the box sealings were frequently used to secure canopic chests. These canopic boxes, in the mastabas, were made of wood and have almost entirely disappeared through decay. However, in the Fifth Dynasty plundered chamber of G 4733 E there were four limestone canopic jars, remains of a wooden chest and a box sealing, lying together in such a position that one can assume that the jars had fallen out of the chest which was secured with strings and a mud seal (Expedition Photograph No. C 5634 and diary note, February 27, 1914). The intact chamber of G 7249 A had been invaded by rain water, but on the lid of the coffin pit were four canopic jars and among them a box sealing. Reisner concluded that the jars had similarly been placed in a wooden chest. Also in the intact burial chamber, G 7112 A, a decayed wooden box was accompanied by a box sealing. This box certainly had held no objects of pottery, stone, or metal and presumably contained canopic packages wrapped in linen (as in the Hetep-heres tomb). The mere fact that box sealings were found singly in the burial chambers of several mastabas supports the conclusion that they were mainly used for sealing the canopic chest or a similar receptacle. Although they were certainly used for sealing boxes containing other equipment in the Hetep-heres tomb, it should be noted that in the intact Sixth Dynasty tomb of Impy (G 2381 A) two wooden boxes, one containing pottery and the other copper models, had not been sealed. The only seals in the tomb of Impy were on the pottery jars, and one of these bore a seal impression of Pepy II, whom Impy served as an official, as we know from other evidence.

It has been suggested that the sealings found in a burial chamber might have been affixed to gifts presented by the king named on the sealing and then kept for years before being used as part of the burial equipment of the man concerned. It is possible that a stone jar or a bowl inscribed with a king's name might have been kept many years before being deposited in a tomb. It is also conceivable that jars of wine or oil, securely stoppered, also might have been retained for a long time. It is extremely unlikely that a box fastened with a light cord could have been secured by a sealing for any considerable length of time. It is obvious that a canopic chest could not have been thus sealed until after the death of the owner, when in the course of preparing the body for the tomb the inner organs were removed and placed in canopic packages or jars. Dr. Reisner has argued that most of the sealings with kings' names found at Giza were used for such canopic boxes and that they indicate that the person in question was buried in the reign of the king named.

In recent years Professor Junker has objected that the name of the king on these sealings does not necessarily date the objects which they sealed or the tomb in which they were placed to that king's reign. The dating value of the king's name would rather depend upon the nature of the titles of the bearer of the seal. Junker argues that although certain seals, such as that of the official of Chephren illustrated in Reisner's *Mycerinus*, pl. A, are inscribed with titles held during the lifetime of the king named, others contain titles which indicate that the official was administering the funerary endowment of a king who may have long been dead. He believes that titles connected with Anubis indicate such service in the Giza Necropolis.[4] Therefore, a sealing which contains mention of the god Anubis would be indication that the tomb in which it was found is later than the king named on the seal rather than of his reign.

However, the use of titles connected with Anubis on sealings which we have seen were very probably used on canopic chests suggests that the seals themselves are more likely to have been employed in the mortuary service of a king who was preparing the equipment for his own tomb, rather than in the administration of the funerary endowment of the dead king's pyramid. It is necessary also to take into consideration other evidence which has been listed above for the dating of certain of the tombs in which inscribed sealings were found. It should be observed that Reisner's interpretation of the growth of the Giza Cemetery differs from that of Junker, particularly in regard to three of the mastabas in which seal impressions were found, G 1457, G 5080, and G 5190 (as well as the tombs of the other members of the Seshem-nofer family). No conflict arises in the appearance of the names of Mycerinus and Shepseskaf on the mud sealings from these tombs, as it does in the case of Junker, who prefers to date these tombs and related mastabas considerably later in Dynasty V. As one runs over the list of sealings found by the Harvard-Boston Expedition and those published by Junker, the impression grows that the kings' names follow in succession the growth of the cemetery as deduced by Reisner from the accumulated mass of evidence. The names of Fourth Dynasty kings appear in the mastabas on primary sites which, by their construction, decoration, and arrangements for burial, should have been the first completed, while the order progresses out across the field as additions were made to the nucleus cemeteries.

In one specific case at Giza, in addition to the Hetep-heres example, we can be quite certain that the king's name on the seal is contemporary with the burial of the man concerned. We know Impy as an official of Pepy II. He appears with his father, Nekhebu, in a record cut in the rock at the Hamamat quarries (where they are both called Mer-Ptah-ankh-mery-ra).[5] Impy is also shown among the courtiers of Pepy II in his pyramid temple.[6] It seems perfectly natural, then, to find a sealing with the name of Pepy II on a jar in the intact burial chamber of Impy (G 2381 A).

In the chapel of Khufu-ankh (G 4520) the inscription on his stela states that it was prepared for him in the presence of the king. The unusual wording of this statement is similarly expressed on a stela of Ny-ankh-sekhemet (Cairo No. 1482) of the time of Sahura.[7] These two records of royal favor to an official who was not a prince are in keeping with the spirit of the early part of Dynasty V. When, therefore, Khufu-ankh's burial is accompanied by a box sealing (probably from a canopic chest) bearing the name of Sahura's predecessor, Weserkaf, it seems very probable that this first king of Dynasty V presented Khufu-ankh with his burial equipment as well as his limestone false-door.

---

[4] H. Junker, *Giza*, III (1938), 226; V (1941), 4; VII (1944), 231–40; IX (1950), 249.

[5] K. Sethe, *Urkunden des Alten Reichs*, I (1933), 93.

[6] G. Jéquier, *Fouilles à Saqqarah, Le Monument Funéraire de Pepi II*, II, pl. 46.

There are certainly examples of seals or seal impressions which must have been used at a later date than the reign of the king named on them. Junker has called attention to a sealing of Isesy which was found by Firth in a burial which must belong to the end of Dynasty VI.[8] There is a cylinder seal in the Brooklyn Museum (No. 44.123.30) which bears the Horus names of Neferirkara (*Wśr-ḫꜣw*) and Ne-user-ra (*Ỉst-ỉb-tꜣwy*, once alone in frame and twice combined with *N-Wśr-rꜥ*) as well as the cartouche of the latter king. The official who carried this seal served as priest of Ra in the Sun Temple of Weserkaf. He also bore scribal titles and apparently carried out his duties in the reign of Ne-user-ra. His connection with Neferirkara is obscure. Perhaps this inscription would be easier to understand if we could examine the sealings mentioned by Borchardt which were found outside the enclosing wall of the Sun Temple of Weserkaf.[9] There were apparently large numbers of these, almost all of which had titles of the priests of this monument. They belonged to officials in the service of dead and living rulers, nearly all the kings from Sneferu to Ne-user-ra being mentioned.

We have seen that in G 4715 B there was found a sealing from the lid of a cylinder jar (Fig. 54) which seemed to bear the Horus and cartouche names of Sahura, as well as an imprint with the name of Ne-user-ra. The names of Sahura were marked as doubtful in the 1915 object-register. The impression was not clear and the material very fragmentary. Since this was a sealing on a piece of tomb equipment, it would fall into a different category from those used in the service of the Weserkaf Sun Temple. It would seem highly dangerous to attempt to draw any conclusion on the basis of the doubtful evidence.

In the present state of our knowledge it is rash to assume that the seal of an official serving the funerary endowment of a pyramid temple of a dead king would be used for the burial of a private person. None of the impressions so far discovered in burial chambers state a connection with the priesthood of a pyramid temple. That they frequently suggest a connection with the mortuary service of a king is to be expected. Such a service would be established in the king's lifetime from the moment at which he began preparations for his tomb. It is very likely that the burial services of favored members of the court would be undertaken by this royal establishment which probably not only controlled the embalming of the body but the preparation of equipment in the royal workshops. It would seem that the imprint of a seal of the king's official is evidence of such a practice. The funerary services of the pyramid temple also must frequently have been established in the ruler's lifetime, perhaps depending upon the time when the building was completed. These services would seem to have fallen under a more restricted authority, since after the king's death, the mortuary workshops in operation in the preceding reign would soon turn to the preparation of the new ruler's equipment. New seals would presumably be made at this time.

Some light is cast upon the workings of the royal mortuary service by a passage in the inscriptions on the façade of the Dynasty V Giza tomb of Senezem-ib Yenty, where his son, Mehy, describes how a limestone sarcophagus was prepared for the father. As translated by John A. Wilson ('Funeral Services of the Egyptian Old Kingdom,' *Journal of Near Eastern Studies*, 3, 1944, p. 202), the inscription ends: 'while he was in the mortuary workshop of a period of time in the house of his estate which is in (the necropolis) Beautiful-is-Isesi.'[10] Wilson suggests in a footnote that part of the statement should be emended to: 'which is the period of time in the house.' The *pr-ḏt* or 'House of his estate' might be thought of as a foundation established for Yenty by the king's favor in the royal mortuary workshop (*wꜥbt*) in the town which had grown up at the desert's edge for the construction of the pyramid of Isesy. This pyramid has recently been identified as being a little south of Saqqara. The embalmment of Yenty would then have taken place there and his body brought to Giza for burial.

---

[7] J. Wilson, 'The Artist of the Egyptian Old Kingdom,' *Journal of Near Eastern Studies*, 6 (1947), 241–242. For Khufu-ankh, cf. *Vol. I*, pl. 65 b.

[8] H. Junker, *Giza*, VII, p. 239.

[9] L. Borchardt, *Das Grabdenkmal des Königs Śaꜣḥu-reꜥ*, I, p. 149.

It is possible that there is an indication here that the mortuary establishment of Isesy continued for some time into the next reign until it had completed the services for such men as the Vizier Yenty. The son, Mehy, who was in charge of Yenty's burial arrangements and decorated at least part of his father's tomb, if he did not do more, evidently succeeded to the Vizierate under Unas. All mention of Isesy in Yenty's tomb is to favors shown in the past, and it looks as though the king had died before the death of Yenty. The freight boat on which Mehy brought his father's coffin has a name compounded with that of Isesy, but this can have been a vessel long in the service of the 'Overseer of the King's Works', still used by Mehy at the beginning of the next reign. It has long seemed to me likely that this family which took charge of royal building operations in Dynasties V and VI (two members were also viziers at the end of Dynasty V) were responsible for the execution of the Pyramid Texts which first appear in the underground chambers of Unas. The walls of Yenty's burial chamber (G 2370 B) are inscribed with offering lists. At present this is the earliest known use of such decoration in a burial chamber and may well reflect the custom initiated by Unas. It would then suggest that Yenty was buried early in the reign of Unas when this idea may have first been conceived.

Therefore, it would appear that the occurrence of a king's name on a seal should mean that it was not placed in a tomb more than a comparatively short time after the ruler's death and usually during his own reign. While one should keep in mind Junker's warning against trusting too implicitly in the evidence for dating purposes of such sealings, it would seem that those which bear titles in connection with a mortuary service may be as useful in this regard as those which indicate an official's position at court.

Since this discussion has been prompted by the titles concerned with the mortuary workshop (*wꜥbt*) of Cheops on the impressions of the king's seal found in the tomb of Queen Hetep-heres I, it might be well in concluding to try to imagine the conditions in an Old Kingdom pyramid city suggested by the bits of evidence given in the preceding pages. There would appear to have been a necropolis workshop which lay on the lower desert ground at the edge of the valley and formed part of the pyramid town which had grown up to house the men overseeing the work of building the pyramid. Probably such a town is represented by part of the area excavated by the Egyptian University northeast of the Mycerinus Valley Temple at Giza. The workmen themselves seem to have been housed at Giza in barracks west of the Second and Third Pyramids. In the pyramid town lived also the funerary priests, some of whom surely were appointed during the lifetime of the king. Undoubtedly, great personages, who held the title of funerary priest amongst a score of other offices, did not feel obliged to take up more than a brief residence at certain periods in the pyramid town, but lived in their palaces elsewhere.

If a king's successor decided to build his tomb at a new site, the funerary priests would probably have remained the only inhabitants of the town after the staff of the royal workshop moved to the new cemetery. With the gradual decrease in the centralization of the royal power at the end of the Fourth Dynasty, mortuary workshops for private people may have continued under less direct royal control at a cemetery such as Giza, which continued in use throughout the Old Kingdom after the court began to use other sites. In the case of the Vizier Yenty, we have seen that his embalmment took place in the royal workshop in connection with the pyramid of Isesy and not at Giza, but lesser people must have made use of mortuary services nearer to their graves. It might be remarked that Yenty's example suggests that the *wʿbt* was near the cemetery rather than in some quarter of the capital, Memphis. The information available at present makes it impossible to determine what part of the equipment for the burial chamber or of the statues for temples and tombs was prepared in the pyramid town in the mortuary workshops, rather than in the craftsmen's quarter in Memphis. One suspects that a great deal of the work was undertaken in the neighborhood of the cemetery, although the inscriptions of Khufu-ankh (G 4520) and Ny-ankh-sekhemet (Mariette, *Mastabas*, D 12), mentioned above, indicate that stelae were carved in the palace under the direct supervision of the king.

---

[10] K. Sethe, *Urkunden des Alten Reichs*, I (1933), 64.

In the very illuminating studies devoted in recent years to the Old Kingdom funeral,[11] sufficient distinction has not always been made between the separate entities of the structures involved in the progress of the body from the house to the grave. It has long been evident that there was a close resemblance between the representation of the *ỉbw* in the Sixth Dynasty Giza tombs of Qa'ar and Idu and the system of terraces and ramps in front of the Valley Temples of Chephren and Pepy II (and now that of Unas). That the *ỉbw* was a tent shelter for the ceremony of the ritual purification of the embalmed corpse is very likely. That such a royal tent should have been set up during the funeral on the terrace in front of the Valley Temple seems a reasonable conclusion, but this does not necessarily mean that the Valley Temple itself was a more monumental or permanent simulacrum of such a tent. Far less is it plausible that the actual cleansing of the corpse should have been undertaken either in the Valley Temple or in the Pyramid Temple; certainly not the embalming operations. Junker has pointed out how abhorrent it would have been to Egyptian thought that the unclean corpse should be brought into the precincts of the funerary temple before all purification had been completed.

The *ỉbw*, the *wʿbt*,[12] the tomb, and what was perhaps the owner's house are all shown clearly as separate structures in the representation of Old Kingdom funerals. The *wʿbt*, or mortuary workshop, as we have seen, was probably in the pyramid town, perhaps not in too close juxtaposition to the Valley Temple, since it would have been an unclean place. There was also a tent-like structure called the *sḥ*. In Chapter II it has been suggested that this may have been a shelter for the equipment set up at the time of burial either beside the mastaba or on top of the mastaba. This *sḥ*, as it appears containing food offerings in the banquet scenes, resembles the form of shelter in the Old Kingdom writing of the 'Divine Booth' (*sḥ nṯr*) but not the little shrine hung with mat work which represents *sḥ* in the epithet of Anubis, 'Foremost of the Divine Booth'. The officials serving the cult of Anubis in his guise of Embalmer God would have been concerned with the equipment in this tent, as well as the administration of the *wʿbt*, and the ceremonies of the *ỉbw*.

---

[11] B. Grdseloff, *Das ägyptische Reinigungszelt* (Cairo, 1941). E. Drioton in reviewing this fundamental study (*Annales du Service*, 40, 1940, pp. 1007–1014) enlarged on the material, as did Selim Hassan in *Excavations at Giza*, IV. pp. 69–102. With certain objections made by H. Junker in *Giza*, VII, pp. 120–122, the present text will be found to be in agreement. Independent studies were published by J. Wilson, 'Funeral Services of the Egyptian Old Kingdom,' *Journal of Near Eastern Studies*, 3 (1944), pp. 201–218, and E. Lüddeckens, 'Untersuchungen . . . der ägyptischen Totenklagen,' *Mitteilungen des deutschen Instituts*, Kairo, 11 (1943), pp. 1 ff. The material has again been treated with a somewhat different interpretation by Herbert Ricke, *Bemerkungen zur ägyptischen Baukunst des Alten Reichs*, II. (*Beiträge*, etc., 5. 1950), pp. 92–98.

[12] As a further piece of evidence in regard to other workshops accompanying that of the embalmer, should be noted a detail of the funeral of Debehen in the reign of Mycerinus (Selim Hassan, *Excavations at Giza*, IV, 1943, p. 176, fig. 122) to which Junker has called attention (*Giza*, VII, 122). The dragging of the statues to the tomb is accompanied by an inscription: '[. . . bringing of the statues (?)], which were made for him, from the mortuary workshop (*wʿbt*) to the tomb (*ỉs*)'.

The mortuary workshop of Cheops must have been in his pyramid town at Giza. This perhaps lay near the Valley Temple which is at present buried under the modern village at the foot of the cliff east of the Great Pyramid. This town may have straggled out to the south along the base of the cliff. Later it was increased by the establishments of Chephren[13] and Mycerinus in the area roughly east and southeast of the Sphinx. Perhaps the southern boundary of these towns is the massive stone wall partly visible east of the sharply rising rock escarpment south of the Mycerinus Valley Temple.[14]

The body of Queen Hetep-heres I was, then, embalmed in the mortuary workshop of her son at Giza. The funeral would have approached Dahshur by boat, either over the waters of the inundation or by canal, landing at the Valley Temple of the North Stone Pyramid.[15] Whether the Valley Temple had a terrace for a purification tent, and whether this tent could be represented by the fragments of a canopy described in Chapter II, is problematical. The funeral procession must have made use of the causeway, of which traces still exist, leading up to the pyramid enclosure where the queen's tomb probably lay. Dahshur must again have become a very quiet place after the funeral. The artisans, the laborers in the construction gangs, and the men concerned with the mortuary service had already moved to Giza. The services in the temple were probably being administered by relatively minor funerary priests, since the ablest men at court would have been involved with the tremendous activity at Giza. Also, Dahshur lies at a distance of several miles from Memphis. These facts may account in part for the temerity of the thieves who plundered the queen's tomb. The reburial at Giza, which it has been suggested was carried out by Prince Hemiunu, Cheops's Vizier and Overseer of All the King's Works, seems to have been accompanied by little ceremony. In fact, the greatest possible haste and secrecy would have been required. Cheops's Valley Temple may not yet even have been laid out, but the empty alabaster sarcophagus and the queen's furniture and equipment could have been landed at the foot of the causeway up which stone was still being dragged for the Great Pyramid, and carried to the mouth of the recently completed shaft (G 7000 X). One wonders whether Cheops was actually present when the empty coffin was lowered into the pit. Could he have been away on some visit of state or military expedition when the offering to his mother's spirit was placed in the niche part way down the shaft?

---

[13] For Chephren's town and the titles connected with it in the tomb of Nefer-nesut (G 4970), see Junker, *Giza*, III (1938), 175–176.

[14] B. Porter and R. Moss, *Topographical Bibliography*, III, *Memphis* (1931), p. 2, key plan of Giza.

[15] This is known only from the vestiges described by Borchardt in connection with the discovery there of the decree of Pepy I concerning the two pyramids of Sneferu. 'Ein Königserlaß aus Dahschur,' *Zeitschrift für ägyptische Sprache*, 42 (1905), 1 ff.

APPENDIX I

THE POTTERY

In view of the importance of the pottery from the Hetep-heres tomb in forming a large body of vessels in a certain dated context, it is proposed here to supplement this pottery with a corpus of the vessels from the Old Kingdom mastabas at Giza. Thus, as in the case of the mud seal-impressions in Chapter VI and the stone vessels in Appendix II, the reader will find here a survey of the Old Kingdom material as represented by the Giza Cemetery. The basis for this study is a text prepared by Dr. Reisner in 1935, and, as in the case of the stone vessels, the types of vessels are those worked out by Reisner and employed by him for describing the pottery vessels in *A History of the Giza Necropolis*, Volume I. In the following text, references to that work will be given simply as *Vol. I.* The listing of vessels from Giza has been somewhat simplified here, with a considerable alteration of wording and the addition of certain material not available to Reisner in 1935. It should be noted that, just as the Hetep-heres tomb provided an unusually important group of vessels for the reign of Cheops, the intact sloping passage tomb of Impy (G 2381 A), who was buried in the reign of Pepy II, produced a similarly closed group of pottery for the end of the Old Kingdom at Giza.

The pottery of the Hetep-heres tomb (G 7000 X) was badly smashed. The reconstruction of its history premised the following events:

(a) The thieves intent on looting the sarcophagus plundered the deposit in the tomb at Dahshur and carelessly trampled the pottery.

(b) The trampled potsherds were gathered in new boxes for transportation to the secret tomb at Giza, during which no attempt was made to sort out the fragments which were swept up mixed with fragments of plaster and linen. There were still a number of whole vessels at this time.

(c) The filled boxes were carried to Giza probably on sledges or by hand. A certain amount of breakage must have taken place in this process and in lowering into the secret tomb. The potsherds found mixed with plaster in the shaft probably came partly from a broken box or boxes and partly from vessels used for mixing the plaster (perhaps taken from the original equipment).

(d) After deposition in the secret tomb, the wood of the boxes decayed. Over a long period of years the collapsing boxes let free the contents to slide in all directions. The stacks of vessels again suffered breakage during this period.

(e) Lying in the tomb for nearly five thousand years, the pottery suffered from chemical corrosion. Hundreds of the potsherds had been corroded partially, and some were found to be entirely disintegrated.

The clearing of the tomb and the preliminary work on the pottery showed at once that only a small percentage of the vessels was perfect. It also proved that the number of fragments from the same vessels which lay together was small. In general, fragments from the same vessel fitting together came from widely separated box groups. In 1935, after the repair of the pottery had been undertaken for five years, the majority of the vessels was still incomplete. It is probable that in large part this was due to the corrosion of the fragments which destroyed them or made their form unrecognizable.

The total number of pottery vessels which could be reconstructed so that their form could be drawn was 281.

1. TYPE FORMS

The class of vessels and models at Giza includes a number of forms not found in the Mycerinus Valley Temple. Reisner therefore revised the classification of pottery set out in *Mycerinus*, retaining the Roman numerals designating the chief types of the Mycerinus classification and adding the numbers LI to LXXIX for the new types. He has also made a number of main subdivisions marked with capital letters (A, B, C, etc.) under which are entered the chief groups from the Mycerinus classification as follows:

A. Jars with rounded base or round-pointed base

Mycerinus Types
- A–II b: large wine jars
- A–IV: traditional offering jars
- A–VI: ovoid jars

New Types
- A–II c: degenerate forms in Dyn. V–VI
- A–LI: bag-shaped jars
- A–LVI: collar jars

B. Jars with flat base

Mycerinus Types
- B–VI: ovoid jars with flat base
- B–XVIII: shoulder jars

New Types
- B–LI: bag-shaped jars
- B–LIII: one-handled jugs

B. Jars with flat base (*contd.*)

Mycerinus Types

B–XIX a–b: squat shoulder jars

New Types

B–LIV: two-handled oil jars
B–LV: neckless shoulder jars
B–LVI: collar jars
B–LVII: models of cylinder jars
B–LVIII: models imitating belted barrel jars
B–LIX: long-necked jars

C. Round-bottomed basins and bowls

Mycerinus Types

C–XXVII: bowls with external rim
C–XXIX: large basins with roll rim
C–XXX: bent-sided bowls
C–XXXII: recurved rim

New Types

C–LXI: with plain rim
C–LXII: with contracted mouth
C–LXIII: molded rim
C–LXV: flaring with internal molding
C–LXVI: with roll rim

D. Flat-bottomed basins and bowls

Mycerinus Types

D–XXXV: large basin with roll rim and short tubular spout
D–XXXVI: recurved rim, long tubular spout
D–XXXVII: with molding under roll rim or plain roll rim; without spout
D–XXXIX: flaring, flat-bottomed bowls

New Types

D–LXXI: large tub of mud ware
D–LXXII: with contracted mouth
D–LXXIV: pan with concave sides
D–LXXVI: bent-sided bowl
D–LXXIX: models of basins and bowls

E. Bowl-tables, bowl and jar stands

Mycerinus Types

E–XXI: bowl-tables
E–XXII: tall and medium bowl stands
E–XXIV: ring stands

F. Degenerate traditional vessels not included in A–E

Mycerinus Types

F–XXV: traditional bread pot ('flower-pot')
F–XXVI: trays of coarse RW

G. Bowl covers and lids

New Types

G–LII: domed covers

The ordinary wares of the Old Kingdom found at Giza are marked as follows:

(1)	RW	ordinary red brown ware with a red surface; finished in some cases with wet-smoothing or with red wash
	BrW	same ordinary ware with a brown surface; finished also in some cases with wet-smoothing or red wash
	RBrW	a more finely levigated clay with reddish brown surface; may be pebble burnished or wet-smoothed, or left as finished on wheel
	RP	produced by polishing (burnishing) a red wash on RW, BrW, or RBrW; also on FRW
	FRW	a term used to designate a fine grained quality of RW; often finished with red wash; not essentially different from RBrW but probably from another locality
	CRW	a coarse quality of the RW or BrW used for traditional offering jars and trays
	CBrW	also designated 'mud ware,' or tub ware; a thick, rather soft brown ware with black or dark brown fracture and brown surface; used for tubs and 'flower pots'
(2)	Wares of clay made largely of *Tufl*, corresponding to the wares made now at Ballas, Deir-el-Ballas, and Keneh; varying from slightly pinkish or drab ware at Ballas to pale greenish wares at Keneh:	
	DbW or KW	drab or greenish drab surface with red or dark, nearly black fracture; usually finished by a fine drab slip smoothed with the hand
	WSR	imitation of *Tufl* ware of RW or RBrW covered with a light colored slip or wash.

The slip has often been stained pinkish by the red of the basic material

(3) 'Special Ware': a brownish or grey ware with small white specks showing in the fracture; apparently not of Nile mud; burning reddish or drab on the outer surface; with thick cream-colored slip; after-smoothed by rubbing

It must be remembered that each of these designations covers a variety of minor differences inherent in the process of finishing and baking. The pottery made in the Old Kingdom was, with rare exceptions, wheel-made.

2. DEVELOPMENT OF POTTERY FORMS IN DYNASTIES IV–VI AT GIZA

More than two thousand vessels and models examined by Reisner come from the burial chambers in the same community which existed continuously from the reign of Cheops until after Dynasty VI. The burial chambers, as we have seen, include two intact chambers of great importance, that of Queen Hetep-heres I (G 7000 X) which forms the subject of this volume, and that of Impy, the son of Nekhebu, who was buried after having served as an official of Pepy II. Most of the other chambers were plundered, many of them grievously, but the pottery in them falls into four main periods:

i. The time from the reign of Cheops to about the middle of the reign of Chephren which includes the early mastabas in the Eastern and Western Fields, as well as the pottery from the Hetep-heres tomb

ii. The latter part of the reign of Chephren to the end of the reign of Neferirkara, in Dynasty V

iii. The latter part of Dynasty V

iv. Dynasty VI

The series begins, without doubt, with the Hetep-heres group with its seventeen well-marked types and its thirty-four subtypes. All but one of these seventeen types appear sooner or later in the mastabas of the Western Field. Even this one exception, the bowl cover (G–LII), may be represented by two small examples from the Dynasty VI tomb of G 2381 Z. Fourteen of the Hetep-heres types were found in the mastabas of Period i, in the following order of frequency:

A–II b	large wine jar
C–XXXII	round-bottomed bowl with recurved rim
B–LV	neckless shoulder jar (for unguents)
D–XXXVI	flat-bottomed basin; recurved rim and long tubular spout
D–LXXI	large flat-bottomed tub of mud ware
D–XXXV	large flat-bottomed basin; short tubular spout
C–LXI	round-bottomed pans and bowls (including bowl with ledge handles)
E–XXI	bowl-table
E–XXIV	ring stand
A–LI	round-bottomed bag-shaped jar
D–XXXIX	flat-bottomed flaring bowls
D–LXXIX	models of basins and bowls
B–LIII	one-handled jug
D–LXXII	flat-bottomed bowl with contracted mouth

Three types (C–XXIX, D–LXXIV, and G–LII) do not occur in the early mastabas. It is to be noted that three important types found in the Hetep-heres tomb and in Period i were dominant in Period ii but practically ceased before the end of Dynasty IV:

D–XXXVI	flat-bottomed basin; recurved rim and long tubular spout
D–LXXI	large flat-bottomed tub of mud ware
E–XXI	bowl-table

Not only did these three important types disappear but other types degenerated, particularly Type A–II b, which became more slender and smaller in Dynasties V and VI and developed a higher neck (variations marked by designation A–II c). Including the obvious degenerations of Type A–II, the sixteen Hetep-heres types are represented in the mastabas by about 50 per cent of the vessels.

Leaving aside certain small models of bowls and jars, there remain twenty-four types which were found in the mastabas but not in the Hetep-heres tomb. In Period i there appear ten significant new types:

C–XXX	round-bottomed bent-sided bowls: reached maximum use in Dynasty V
B–LIV	two-handled oil jar: appears first in G 4140 in the reign of Cheops and in the mastabas of the second addition to Cemetery 4000; continues to end of Dynasty VI. It should be remembered that these are not an Egyptian form but imported, probably from Syria
A–VI	round-bottomed ovoid jars, with shoulder, neck, and roll rim
B–VI	flat-bottomed jar of ovoid form, with shoulder, neck, and roll rim
B–XVIII	medium and small shoulder jars corresponding to type A–II c but with flat base
B–LVIII	imitations of stone models of belted barrel jar
A–LVI	round-pointed jars with collar neck
C–XXVII	round-bottomed shallow bowls with external molding on edge
C–LXV	shallow round-bottomed flaring dishes with internal molding
C–LXII	round-bottomed bowls with contracted mouth

A few other new types lack the significance of the above ten introduced in Period i. The number of examples representing new types forms about 30 per cent of the total number of vessels in this period.

The remaining types were apparently introduced after Period i, probably most of them in Dynasty V. Among these are two degenerate forms of the round-bottomed bowl, Type C–LXIII with molded rim and Type C–LXVI with a roll rim. Most characteristic are the degenerate forms of the round-bottomed bowl with recurved rim, Type C–XXXII, but these hardly justify creating a new type to describe them. There is also a new form of the bent-sided bowl with a flat bottom, Type D–LXXVI.

The change effected by the development of the pottery between the middle of the reign of Cheops and a time at about the middle of the reign of Pepy II is shown by a comparison of types presented by the two intact tombs of Hetep-heres and Impy, the son of Nekhebu:

Hetep-heres (G 7000 X)

A–II b	large wine jars	11
A–LI	bag-shaped pots	40
B–LIII	one-handled jug	1
B–LV	neckless shoulder jar	56
C–XXIX	large round-bottomed basin	2
C–XXXII	round-bottomed basin; recurved rim	2
C–LXI	round-bottomed bowl; plain rim	35
D–XXXV	large basin with spout	4
D–XXXVI	basin with recurved rim; tubular spout	15
D–XXXIX	flaring bowls; flat bottom	12
D–LXXI	large tubs of mud ware	10
D–LXXII	bowls with contracted mouth, flat bottom	10
D–LXXIV	pan with concave sides	3
D–LXXIX	models of basins and bowls	53
E–XXI	bowl-tables	6
E–XXIV	ring stands	10
G–LII	bowl covers	11
	Total 17 types	281

Impy (G 2381 A)

B–LIV	two-handled oil jar	5
C–XXVII	bowl with external rim	1
C–XXX a	round-bottomed bent-sided bowl	9
D–XXXV a	large basin with spout	2
	Total 4 types	17

The tomb of Hetep-heres I was a queen's tomb and much larger than that of Impy which belonged to a man with the office of 'Overseer of All the King's Works.' Nevertheless, it is remarkable that only one type of the Hetep-heres vessels, the large basin, Type D–XXXV, was found in the Impy tomb. The bent-sided bowls (C–XXX a), the bowl with flaring sides and external rim (C–XXVII), and the imported two-handled oil jars of special ware (B–LIV) did not occur in the Hetep-heres tomb. It might be remarked that the oil jars appear in Period i and that a one-handled imported jug (B–LIII) was among the Hetep-heres equipment. The Impy oil jars are, therefore, later examples of foreign vessels which were known already in the time of Hetep-heres. The Impy bowls were all round-bottomed forms, although the basins had flat bottoms. The Hetep-heres tomb contained many small examples of the main types A–LI (bag-shaped pot) and B–LV (neckless shoulder jar). The use of these small vessels continued in the mastabas and in Dynasty V developed into degenerate splay-foot forms which occurred in numbers in the burial chambers. These models were entirely wanting in the tomb of Impy, but at the same time a large number of copper models were included among the burial furniture.

The early deposits of Period i contain the significant types D–LXXI (mud-ware tub), D–XXXVI (flat-bottomed basin with recurved rim and tubular spout) and the large wine jars of Type A–II b. Although the Hetep-heres tomb does not contain the two-handled oil jar of Type B–LIV, it appears soon afterwards in G 4140 and occurs frequently in the tombs of Period i. The Hetep-heres one-handled jug (B–LIII) is also found again in the mastabas of Period i. It is a curious fact that although earlier forms of the loop-handled oil jars with combed surface decoration are known from Palestine and Syria, neither the one-handled nor the two-handled foreign pottery vessels have been found in Egypt after the end of Dynasty I until they appear again at Giza in Dynasty IV. The two-handled jar with combed surface decoration continues to appear from Dynasty IV to the end of Dynasty VI. It would seem dangerous to draw any conclusion from this fact, since the absence of these vessels in Dynasties II and III may be due to accident and future excavation may produce them.

Period ii (the latter part of Dynasty IV–early Dynasty V) is marked by the absence of Types D–LXXI (mud-ware tubs) and D–XXXVI (spouted basins with recurved rim). There is an increased use of round-bottomed bowls of Types C–XXX (bent-sided bowls) and C–XXXII (bowls with recurved rim). Type A–LI (bag-shaped pot) disappears, and there is a degeneration in the forms of the models of Types B–LV (neckless shoulder jar), B–LVI (collar jars), and B–LVIII (belted barrel jars).

Period iii (Dynasty V, from the end of the reign of Neferirkara) shows a change in the form of the wine jars from Type A–II b to A–II c (large jars). There is an increased use of well-formed bowls of Type C–XXXII (recurved rim) as well as degenerate forms of these bowls with rudimentary or flaring recurved rim. Use is also made of Type C–LXV, the flaring-sided vessel with internal molding.

Finally, in Period iv (Dynasty VI) there is a general decrease in the number of vessels used. The bowl type C–LXIII with flaring sides and molded edge is in frequent use. The wine jar degenerates into the small, long-necked form of A–II c. There is a prevalence of round-bottomed basins and bowls.

3. THE POTTERY FROM THE HETEP-HERES TOMB (G 7000 X)

(1) GROUP A: TYPE II b. TALL WINE JAR WITH BULGING SHOULDER AND ROUND-POINTED BASE, SHORT NECK, ROLL RIM (ALL WSR), 11 EXAMPLES

This jar replaces the old wine jars of Dynasties II–III and occurs in two forms, (*a*) slender and (*b*) bulging. In the Hetep-heres tomb only the second form A–II b was found. Two of these vessels lay in the offering niche, part way down the shaft (Figs. 15, 16). In the tomb itself, one complete jar was recovered, seven were nearly complete, and one was preserved only in its upper part. There were, then, eleven in all, of which eight are drawn in Fig. 58, one in Fig. 61, and two in Fig. 16. Three are illustrated in the photograph on Pl. 46 a. The jar, No. 34-4-8, was the one which had been placed in the gold-covered box with the inlaid lid beside the sarcophagus. The size of the vessels ranges from 29 to 40 cm. in height, with a maximum diameter of 19 to 25 cm. The diameter of the rim varies from 9 to 11·5 cm.

(2) GROUP A: TYPE LI. BAG-SHAPED POTS (ALL FINE RED BROWN WARE), MORE THAN 40 EXAMPLES

Forty examples of the bag-shaped pot were found, of which seventeen were perfect and a number of others nearly complete. There were fragments of at least eight more vessels. The size ranged from 8·8 to 19·6 cm. high; diameter 11·2 to 22·9 cm.; diameter of rim 6·2 to 11·6 cm. These are illustrated in Figs. 59–60 and in Pl. 46e, 1/1–3.

(3) GROUP B: TYPE LIII. ONE-HANDLED JUG WITH FLAT BOTTOM, 1 EXAMPLE

The one-handled pottery jug is rare. Only one example was found in the Hetep-heres tomb and seven (two of which are spouted pitchers) in the burial chambers of the mastabas. Reisner remarks that the relation to the stone jar of Type XIV is obscure, but the problem should perhaps be stated in somewhat different terms. In the first place, the Hetep-heres example (No. 1711/44 plus 1711/12; height 32·8 cm.; maximum diameter 20·4 cm.; Fig. 61; Pl. 46d), like the other vessels of this kind from Giza, is of a special ware with white specks in the fracture. This piece is of a somewhat redder color than the special ware used in the two-handled oil jars, resembling the one-handled jar from G 2170 A (Fig. 95; Pl. 53f) both in the ware and in the fact that it has a red burnished surface rather than the cream colored slip applied to the jars from G 4340 and 1233 (Fig. 95; Pl. 53f). The one-handled jar from G 1220 has a combed surface decoration of horizontal lines (Pl. 52b, c). The Hetep-heres example lacks the molded cord decoration which appears at the base of the neck on four of the other jars (Fig. 95) and seems to have had a plain mouth without rim. However, there seems no doubt that both in ware and in shape this piece is a foreign importation like the other one-handled and two-handled jars of special ware.

The jug from G 1220 A still retained its plaster stopper so that it is impossible to determine how the handle joined, but it gives the impression of being attached to the rim of the jug (Pl. 52b, c). One other example from Giza (Selim Hassan, *Excavations at Giza, 1930–1931*, 1936, p. 146; from shaft 294) has the handle attached to the rim of the jug, as do the stone vessels of Type XIV from Giza and the earlier examples in stone from Saqqara (Lauer, *Fouilles à Saqqarah, La Pyramide à Degrés, Compléments*, 1939, p. 5, pls. XIII, XV–XVIII; Quibell, *The Step Pyramid*, pls. 19, 103, 104 A; Emery, *Great Tombs of the First Dynasty*, I, 144). Many of these stone forms closely resemble the early forms of Syrian and Palestinian pottery jugs from which they seem to be derived (Petrie, *Abydos*, I, 1902, pl. VIII; *Royal Tombs*, II, 1901, pl. LIV; *Tarkhan*, I, 1914, pl. LVIII; Macramallah, *Fouilles à Saqqarah, Une Cimitière Archaïque à Saqqarah*, 1940, pl. XLVI). The only other one-handled vessel, which comes from the early western cemetery at Medum and therefore probably belongs to the end of Dynasty III, also has a foreign look (handle attached to rim; Petrie, *Meydum and Memphis*, III, pl. XXIV, 4). It has a peculiar form with flaring mouth which is hard to parallel elsewhere, although it has a certain resemblance to the Middle Bronze I jugs in Palestine (P. L. O. Guy and R. Engberg, *Megiddo Tombs*, O. Inst. Pub. XXXIII, 1938, pl. 15; from Tomb 989 B 2).

Any reference to one-handled jugs imported to Egypt should not omit mention of the painted decoration which appears on a characteristic group which were first discovered in the royal tombs at Abydos of the First Dynasty kings Semerkhet and Wedymu (Petrie, *Royal Tombs*, II, pl. LIV; *Abydos*, I, pl. VIII). These have on the shoulder a series of black or red pendent triangles filled with little dots. These are accompanied by cross-hatched and wavy bands. One vessel has recently been published from a Dynasty I tomb at Saqqara which has a bird between the pendent triangles (Emery, *Great Tombs of the First Dynasty*, I, p. 124), and other complete examples of these jugs are now known from Saqqara and Abusir which amplify the material first recognized in Petrie's sherds (Bonnet, *Ein frühgeschichtliches Gräberfeld bei Abusir*, von Siegelin Expedition, vol. IV, no date, pl. 27; Macramallah, *Une Cimitière Archaïque à Saqqarah*, p. 13, pl. L).

A ware which seems to be identical in shape and decoration to these vessels from First Dynasty Egyptian graves has been found in the Amouq G level at Tell el Judeideh (former Stratum XII) in the Antioch Plain in Northern Syria. This accompanied loop-handled jars with traces of comb finishing, according to a note by their discoverer, R. Braidwood, in Miss Helene Kantor's article, 'The Early Relations of Egypt with Asia' (*Journal of Near Eastern Studies*, I, 1942, p. 198, n. 141). Level G is stated to be of fairly long range, 'being certainly in part contemporary with Late Predynastic as well as Early Dynastic times.' W. F. Albright, in his *The Archaeology of Palestine* (1949), p. 74, calls attention to a sherd of one of these decorated vessels which has now been found in an Early Bronze II context in a tomb near Beth Yerah.[1]

It will be observed that in the Hetep-heres jug, as well as those from G 4340, G 1233, and G 2170 (Fig. 95), the handle does not join at the rim but at a short distance down on the neck of the jar. The closest parallel that I can find for this (also with the rope decoration at the base of the neck) is an example from Tomb A at Jericho (C. Schaeffer, *Stratigraphie Comparée*, 1948, fig. 113) and another illustrated by Miss Kantor (*J.N.E.S.*, I, 1942, p. 209; RR 1). A more slender form, with the attachment of the handle farther down on a long neck is to be found at Ay (J. Marquet-Kraus, *Syria*, 16, 1935, pl. LVIII) and in a Byblos piece of which a photograph is published in Macramallah, *Une Cimitière Archaïque à Saqqarah* (plate following p. 69).

---

[1] Professor Albright has been kind enough to refer me to B. Maisler's article (in Hebrew with an English summary): 'An E. B. Age Tomb found at Kinnereth' in *Bulletin of the Jewish Palestine Exploration Society*, vol. 10, no. 1, p. 6. The sherd illustrated there on pl. I, no. 45, is, as both Maisler and Albright state, unmistakably of the type of painted vessels of Dynasty I date from Abydos, as well as closely resembling the material at Tell el Judeideh. Thus this painted ware has now been found for the first time in Palestine (excavated in July 1940) at the southwest corner of the Sea of Galilee in the necropolis of Beth Yerah (Khirbet Kerak).

While the one-handled pottery jug continued to be used in Palestine and Syria, it does not appear in Egypt after Dynasty I except in a few odd pottery forms which are hard to parallel abroad but which are evidently foreign. It does continue to be popular in the little stone ointment jars which were evidently copied from the foreign pottery forms of Dynasty I. It would appear that the Giza pottery examples with the handle attached to the neck are a later development of the type where the handle joins the rim. While this is a problem primarily for the specialist in the pottery of Western Asia, the Egyptian forms from Giza, as in the case of the two-handled oil jars, should prove of some assistance, since they are well fixed within the Old Kingdom. The Hetep-heres example is well dated to the reign of Cheops. The examples from G 4340 and 1233 belong to the first half of Dynasty IV, and that from G 2170 probably to the second half of Dynasty IV. The pitcher from G 1412 A (Fig. 95) should be of the end of Dynasty IV or the beginning of Dynasty V, while the jar from G 1220 A (Pl. 52 b, c) is of the second half of Dynasty V. These jars will be listed again under the pottery from the Giza mastabas under Type B–LIII.

(4) GROUP B: TYPE LV. NECKLESS SHOULDER JAR WITH FLAT BASE, 56 EXAMPLES

The flat-bottomed neckless shoulder jar has a flat raised band around the wide mouth. It is obviously copied from copper vessels and resembles the copper ewer, without spout. No example was found in the Mycerinus Valley Temple but the type was common in the early mastabas. There were fifty-six examples of these jars in the Hetep-heres tomb. Of these, the fifty-three most complete are illustrated on Figs. 62, 63, and Pl. 46 c, e, f. In addition to the fifty-six, there were a number of fragments which may have represented twenty-five more vessels. Most of the examples were of a fine brown ware with smooth surface (RBrW smooth). The examples range from tall jars of over 20 cm. in height to small models less than 10 cm. high. Any distinction between the large jars and the models could only be marked arbitrarily and is clear in the drawings.

(5) GROUP C: TYPE LXI. ROUND-BOTTOMED PANS AND BOWLS, 35 EXAMPLES

The round-bottomed pans, bowls, and basins are listed in *Mycerinus* as Types XXVII–XXXIII. These include no examples of the vessel with plain rim. The forms with a plain rim are, therefore, given here a new type C–LXI with six subdivisions. They are all of red brown ware and consist of thirty-five examples in all. They range considerably in size, as is indicated in the illustrations.

C–LXI a	wide shallow pans or bowls with plain rim: 2 examples, Nos. 1047/178 and 1047/153; Fig. 64; Pl. 46 b
C–LXI b	deeper pans with upcurving sides: 5 examples: 34–4–87, 88, 90, 91, and 1472/166; Fig. 64; Pl. 46 f 1/1–2, 4, 5
C–LXI c	wide open bowls: 6 examples, 34–4–29 to 31, 676/18 (Pl. 48 c, 3/1), 1172/97 and 1021/67; Fig. 64
C–LXI d	wide bowls with lip spout and ledge handles: 14 examples, 34–4–15 to 28; Figs. 65, 66; Pl. 48 a
C–LXI e	deep bowl with spreading sides: 1 example of RP, No. 34–4–62; Fig. 61; Pl. 48 b, 3/1
C–LXI f	deep bowls with nearly vertical sides and round bottom: 7 examples, 34–4–63 to 68 and 1713; Fig. 61; Pls. 48 b, 2/1–4, 3/2–3, 48 c, 1/3

(6) GROUP C: TYPE XXIX. ROUND-BOTTOMED DEEP BASINS WITH ROLL RIM OR MOLDED RIM AROUND MOUTH, 2 EXAMPLES

The large basins of Type XXIX, with or without spout, are usually of red brown ware with black fracture, covered with a red wash, either burnished (RP) or unburnished. Two examples were found in the Hetep-heres tomb. One of these of WSR (34–4–32; Fig. 72; Pl. 48 d, 3/2) has a short tubular spout and has been typed C–XXIX a. The other of RW is without spout and is given the type designation C–XXIX b (1036/29; Fig. 61; Pl. 47 b, 2/2).

(7) GROUP C: TYPE XXXII. ROUND-BOTTOMED BOWLS WITH RECURVED RIM, 2 EXAMPLES

This type was found in the Mycerinus Valley Temple and was particularly frequent in mastabas of Dynasties V–VI. In the Hetep-heres tomb were found two examples (1066/7, 1050/8; Fig. 61; Pl. 48 c, 2/2). These were incomplete but sufficiently preserved to determine the form of the bottom. Both of these were of polished RBrW ware.

(8) GROUP D: TYPE LXXI. FLAT-BOTTOMED TUBS, 10 EXAMPLES

In the Hetep-heres tomb there were a number of large tubs, here designated by the new type D–LXXI. The ware was a 'mud ware' with brown surface and black or brown fracture (CBrW). The walls of the tubs were the thickest ever encountered in pottery vessels except in the traditional 'flower-pot' type. All of the examples were smashed, and only ten could be sufficiently reconstructed to be drawn. Judging from the unassembled fragments, four or five more were probably originally included in the deposit. The tub has a flat bottom, slightly convex sides, and a broad band around the mouth (usually the greatest diameter). Seven of the reconstructed vessels (Figs. 68–71) had the bottom perforated with a hole in the center (Type C–LXXI b), and three had unperforated bottoms (Type C–LXXI a). It will be seen from Fig. 67 that No. 1084/6 (Pl. 47 b, 1/1) is smaller than the others with a height of only 25 cm. and a rim diameter of 52 cm. The others range in measurement from 40 to 58·5 cm. high, 57 to 72 cm. in width at the rim, and 23 to 42·4 cm. at the base. One example is shown in Pl. 47 a.

(9) GROUP D: TYPE XXXV. BASINS WITH ROLL RIM AND SHORT TUBULAR SPOUT, 4 EXAMPLES

The large basin with roll rim, flat bottom, and short tubular spout served a different purpose than did the great tubs. It is known as the vessel into which the beer brewer filtered the liquid beer, the short tubular spout facilitating the later operation of pouring out the beer into jugs. The examples in the Hetep-heres tomb were of RP ware like most of those found elsewhere. The higher, more narrow form of subtype D–XXXV a is represented in the Hetep-heres tomb by No. 1071/53 (Fig. 72; Pl. 47 b, 2/1). It is 29 cm. high with a maximum diameter of 33·2 cm. and a base diameter of 9·8 cm. The other three examples were all of the wider bulging form of D–XXXV b. Only one of these could be sufficiently reconstructed to be drawn (Pit No. 2; Fig. 72). This was 28 cm. high with a maximum diameter of 49·2 cm. and a width at base of 20 cm. The two other fragmentary vessels from the shaft consisted only of pieces of the lower part of the base.

(10) GROUP D: TYPE XXXVI. FLAT-BOTTOMED BOWLS WITH RECURVED RIM AND TUBULAR SPOUT, 15 EXAMPLES

The bowl with flat bottom and recurved rim is one of the most characteristic forms produced by the potter's wheel. The ware used in the Hetep-heres group was mostly red brown ware of fine texture with a smoothed brown surface. The examples found elsewhere were usually of RP ware. The fourteen examples from G 7000 X range from practical vessels of a height of 20 cm. and a diameter of rim of 30 to 34 cm. to small models about 5 cm. high. They are all illustrated in Figs. 73 and 74 (see also Pls. 47 c; 48 b, 1/1–2; 48 c, 2/1, 3, 3/3; 48 d, 3/1). In addition, there was one example of a bowl with deep open spout. It is that numbered Pit No. 1, from the debris of the shaft (Fig. 72).

(11) GROUP D: TYPE LXXII. FLAT-BOTTOMED BOWLS WITH CONTRACTED MOUTH, 10 EXAMPLES

In the Mycerinus pottery no example was found of a flat-bottomed bowl with contracted mouth and plain rim. It is necessary to mark these vessels with a new type designation, D–LXXII. In the Hetep-heres tomb, one low wide form of RBrW ware of Type D–LXXII a was perfect (34–4–89; Fig. 61; Pl. 46 f, 1/3). This was 3·8 cm. high with a maximum diameter of 7·6 cm. A second bowl of deeper form, D–LXXII b, was nearly complete and was 3·8 cm. high with a maximum diameter of 16·8 cm. (1191/35; Fig. 61; Pl. 48 b, 4/1), while the rim fragments were found of one more bowl of D–LXXII b (No. 675/95; Fig. 61). These were of RP ware. Type LXXII c, which has an open spout, was represented by one small RW example 5 cm. high and with a maximum diameter of 12·8 cm. (34–4–92; Fig. 61; Pl. 48 b, 1/4). Two other examples of RBrW have a short tubular spout which receives the subtype designation D–LXXII d. One of these was only represented by rim fragments, but the second (678/1) is drawn on Fig. 61. Finally, Type D–LXXII e has an internal rim which imitates stone forms. Four examples (682/72, 1068/48 (Pl. 48 c, 1/1), 1073/91 (Pl. 48 c, 1/2) and 1066/31) are drawn on Fig. 61. These were of RBrW ware.

(12) GROUP D: TYPE XXXIX. FLARING FLAT-BOTTOMED BOWLS, 12 EXAMPLES

The type of flat-bottomed bowl with flaring sides was marked in Mycerinus as Type XXXIX. In this case the rim was drawn out horizontally and thickened around the edge (flattened on the outside). This form occurred in eight examples in the Hetep-heres tomb, where it is called D–XXXIX a. Seven are of RP ware and one of red brown smooth. These are 34–4–75 to 80 and 675/127, 675/19 on Fig. 75. The last two were only preserved in rim fragments. Examples are shown on Pl. 49 c, the lower two rows.

The bowl with the flat bottom, plain rim, and straight flaring sides is an old form well known in stone and pottery in Dynasty III. Here it is called D–XXXIX b. In stone it was represented in the Mycerinus Temple. It occurs frequently as a large vessel in the Giza mastabas but was common both in stone and pottery models. The pottery models are given under D–LXXIX. The two practical Hetep-heres vessels of Type D–XXXIX b are 34–4–70 and 71 on Fig. 75 and Pl. 48 b. The ware is RW.

The flaring bowl with flat bottom and molded ring on the lower part of the flaring mouth, D–XXXIX c, is probably derived from the stone bowl with cup hollow. Both these forms may have originated in copper. Very few were recorded from the Giza mastabas. One example from G 7000 X (34–4–69; Fig. 75; Pl. 48 b, 1/3) was made of RBrW smooth. The other (1420/7; Fig. 75) was only half complete. The fragment appears on Pl. 48 c, 3/2. The edge of the bowl was prolonged horizontally at the same level as the internal rim.

In Fig. 61 the fancy form 675/165 has been labeled as the discarded Type D–LXXIII. With its four lips it resembles Type D–XXXIX d (36–5–3) on Fig. 122.

(13) GROUP D: TYPE LXXIV. FLAT-BOTTOMED PANS WITH CONCAVE SIDES AND FLARING PLAIN MOUTHS, 3 EXAMPLES

A type of flaring pan was encountered in the Hetep-heres tomb which differed so essentially from any vessel recorded in *Mycerinus* that it has been marked by a new type D–LXXIV. The ware is red polished. There were three examples: Nos. 34–4–72, 73, 74 on Fig. 75 and in the upper row of Pl. 49 c.

(14) GROUP D: TYPE LXXIX. MODELS OF BASINS AND BOWLS, 53 EXAMPLES

The models of basins and bowls present twenty examples of low shallow forms (saucers; D–LXXIX a). Two of these (34–4–86, 1414/8) were of RW; the rest were of RBrW. Of these, 34–4–81 and 86 are drawn on Fig. 75 and appear in the top two rows of Pl. 47 d. There were thirty-three examples of the high, deep forms (D–LXXIX b). Four of these (34–4–82, 83, 84, 85) are drawn on Fig. 75, and appear in the lower two rows of the photograph on Pl. 47 d. Eleven of these models were of RW and the rest of RBrW.

(15) GROUP E: TYPES XXI, XXIV. TABLES, BOWL STANDS, AND JAR STANDS, 16 EXAMPLES

The group of vessels which contained the bowl-table, the bowl stands, and the jar stands was well outlined in the

Mycerinus pottery and requires only a slight readjustment of the subtypes to cover all forms of the Old Kingdom. In the Hetep-heres tomb there were only two types of group E, XXI and XXIV. These were certainly used as part of the burial equipment. The tall form of the bowl-table (E–XXI) and the tall bowl stand (E–XXII) were principally for chapel equipment. In the Hetep-heres tomb occurred only the low form of the bowl-table and the ring-stand (E–XXIV), as follows:

E–XXI	Bowl-table of one piece: wide deep bowl with internal rim; short, hollow stand with concave sides and flaring base. This form has a curious resemblance to the bowl-tables of the Late Predynastic and Early Dynastic periods. Six examples were found in G 7000 X, one perfect and the rest nearly complete. They were of RBrW ware. They are drawn on Fig. 76 and photographed on Pl. 49 d, e
E–XXIV	The ring-stands were of an early form which was succeeded by an even lower one. They have a roll rim at top and bottom, with slightly concave sides and slightly flaring base. Ten examples occurred, of which three were perfect and the rest nearly complete. They are all drawn on Fig. 77. Eight are photographed on Pl. 49 b, and one on Pl. 46 c, 1/1

(16) GROUP G: TYPE LII. BOWL COVERS AND LIDS, 11 EXAMPLES

In the reliefs, particularly in the picture lists of food offerings, bowls are shown with covers, with or without handles. The bowls are usually represented as bowl-tables or bowls on short stands. These covers have not been recovered from the burial chambers in the mastabas but in the Hetep-heres tomb were found a number of covers of several forms which undoubtedly reveal the existence of a type of vessel hitherto unsuspected. Tentatively these covers have been assigned to the wide bowls of Type C–LXI and to the bowl-tables, but some of the covers could not be fitted to any of the bowls recovered and probably belonged to vessels lost or destroyed as a result of plundering in the original tomb.

G–LII a	wide, low domed cover with two ledge handles opposite each other on top of cover (cf. Type C–LXI d); cover with flat, thickened rim of RBrW smooth: one example, 34-4-46; Fig. 78; Pl. 49 a 1/1
G–LII b	wide, low domed cover with loop handle on top (cf. bowl types C–LXI c, d) with plain rounded rim, RBrW smooth: 8 examples, 34-4-44, 45, 47 to 52; Fig. 78; Pl. 48 d, 1/2, 2/1, 2/2; Pl. 49 a, 2/1, 3/1
G–LII c	smaller domed covers pierced with holes, with loop handle on top; with plain rim or angular internal rim; RBrW smooth: 2 examples, 34-4-42, 43; Fig. 78; Pl. 48 d, 1/1, 1/3

SUMMARY OF HETEP-HERES POTTERY

The pottery vessels found in the Hetep-heres tomb were largely made for the funeral. One remarkable peculiarity is the prevalence of one kind of ware, the hard, fine, red brown ware which has been well smoothed, apparently with a block of wood or a pebble. It is examples of this ware which have suffered most from corrosion. These vessels are practically unfinished and were obviously made by one workshop for the burial equipment of the queen. The baking varied a little and the variation caused a gradation in the quality of the ware from a kind quite red in the fracture through brown to black fractures. However, all these examples marked 'RBrW smooth' were mixed with the same materials and made on the wheel in the same workshop. The color of the surface varies from red to brown, with brown more frequent than red. Only some seventeen vessels in groups C and D listed above (C–LXI e, D–XXXV a, b, XXXIX a, LXXII b, and LXXIV) had received a red wash and been polished. These types are well known earlier and later as having examples of RP predominating. Other types, such as the neckless shoulder jar and the flat-bottomed bowl with recurved rim, which are represented in the mastaba pottery by RP examples, appear here without wash or polish.

Of the remaining vessels, twelve were of WSR (light colored slip), which was only an imitation of practical jars of drab ware, such as are now made at Keneh (A–II b and C–XXIX a). The material of these vessels is similar to the other RBrW examples and they were probably made in the same workshop. The ten large flat-bottomed tubs (D–LXXI) with band rim around the mouth appear to be made of a different ware, although even this may be made from the same clay. The sides are very thick, 1·5 to 2·5 cm., black in the fracture with a narrow brown layer on each side and a brown surface. The ware is less well levigated than the RBrW ware of the other vessels. It is of coarser texture, and the thick black fracture is noticeable. The basic clay may have been the same, but the ware is a coarse brown ware (CBrW). It is called 'mud ware' in the description of these vessels.

Eighteen vessels were certainly not of the same clay. Seventeen (Types C–XXIX b, D–LXXII c, D–XXXIX b, and D–LXXIX a, b) were of ordinary red ware (RW), wheel-made and wet smoothed. This is the cheapest of the hard wares. One vessel (Type B–LIII), the one-handled jug, was made of the curious clay with white specks which is of origin foreign to Egypt.

None of these vessels showed any signs of usage, as would have been the case if they had been taken from the household equipment of the queen, nor do they show the diversity which is to be expected in that case. Any ordinary collection of household vessels would have consisted of cooking vessels, vessels for storing food and drink, table vessels, and toilet vessels. This equipment would have accumulated over a period of years and would have been made in a number of different workshops. At any point of time, say at the death of the queen, some would have been new, some slightly worn, and some old and broken. Yet the Hetep-heres pottery is almost entirely new and many pieces were not finished. Dr. Reisner concluded that they were made for the funeral of the queen. This view was confirmed by one bowl with recurved rim in which a spot damaged in the making had been filled out with reddish plaster (sulphate of lime). This patch would have been impractical in a vessel of daily use.

In spite of the fact that the vessels were made for the funeral, in general they represent living, practical, and seldom traditional forms. The ware is so hard and fine that the vessels, even those of the smallest size (models), were adapted to contain any sort of material, water, wine, beer, oil, soup, or stew. The one class, the utility of which may be called into question, is Type A–II b, which has the form of a wine or beer jar. These well-made jars are a little thin-walled to be practical. At the same time the use of the thin, whitish-drab slip proves that they were intended to represent stout jars of the same form made of drab ware or greenish drab ware called by Reisner K(eneh) W(are). These eleven jars are certainly traditional-ceremonial vessels, but they represent a practical type probably still in use at this time and later. The other vessels show none of the degeneration of form so characteristic of the traditional forms of the private graves. The influence of tradition may be seen in the very significant large models which represent symbolically the large vessels of the same type.

The pottery forms, all made on the wheel, present forms of various origins. A certain number are derived from older stone forms, such as the bowls with contracted mouth (D–LXXII), both those with plain and those with internal rim. A few others present forms of metal origin, such as the neckless shoulder jar (B–LV) and the bag-shaped jar (A–LI). The vessels which appear to be real pottery forms include a number of remarkable types which had not hitherto been encountered (all of RBrW):

Type C–LXI d	Wide round-bottomed bowl with lip spout on one side and two ledge handles. The form is obviously adapted to pouring hot liquids such as soup (14 examples)
Type E–XXI	Bowl-table in single piece with bowl on stand. Of the six examples, two were models and similar models are known from the Giza mastabas, while earlier examples appear in Dynasties O–I. This is probably the bread table and is similar to that represented on the 'primitive niche stones'. There, it usually stands on an ordinary tall bowl-stand and bears loaves of bread (see also the slab-stelae and the tablet scene of the false-door). The rounded bottom on the inside would have prevented the upright position of the loaves or half-loaves shown in the reliefs, but the sides would have covered the lower part of the loaves and the representation in relief is probably schematic
Type G–LII a	Wide shallow bowl cover, with rounded top and two ledge handles. There was only one example. The ledge handles and the size of this cover connect it with the large bowls with lip spout and two ledge handles (C–LXI d) which have been presumed to contain hot liquid, and for which the cover would have been advantageous. The use of lids, usually of basketwork, is well known from the reliefs of Dynasty V
Type G–LII b	Cover with loop handle on top. Like G–LII c but without the holes (8 examples). These covers seem to be better fitted to the size of the bowl-tables (E–XXI), but they could also have been used on the bowls of Type C–LXI d. In the reliefs, a number of bowls on ring-stands are shown which have basketwork covers with loop (?) handle
Type G–LII c	Wide cover with rounded top and loop handle on top; cover pierced with many holes to permit the escape of steam. The two examples could not be made to fit exactly any of the other vessels found in the tomb

The date of the Hetep-heres furniture is clearly marked to the reign of her son Cheops by the mud sealings bearing the impressions of the official seal of the mortuary workshop (*wꜥbt*) of that king. Reisner's reconstruction of the events in the reign of Cheops indicates that the death of the queen must have occurred in the first half of the reign and probably in the year 10. The pottery prepared for the funeral equipment presents seventeen types (thirty-four subtypes). The vessels from the Hetep-heres tomb amount in fact to a corpus of the pottery types used by the royal family in the first half of the reign of Cheops, although probably not a complete corpus. As a corpus, although incomplete, it will serve as a basis for the examination of the pottery found in the Giza mastabas dated to the reign of Cheops.

(4) POTTERY FROM THE GIZA CEMETERY

In order to complete the corpus of Old Kingdom pottery from Giza, the examples from the mastabas will be taken up chronologically in the order of the four periods listed under Section (2). It is only in the Western Cemetery that the pottery was sufficiently preserved to indicate these four groups:

i. Cheops to mid-Chephren: the early mastabas in the three nucleus cemeteries: 1200, 2100, and 4000

ii. The mastabas of the later part of Dynasty IV and early Dynasty V

iii. The mastabas of Dynasty V after Neferirkara

iv. The mastabas of Dynasty VI

The burial chambers in the nucleus mastabas of the Eastern Field had been so thoroughly cleared out by thieves and by reuse of some of them in Saite-Roman times that the amount of pottery was, with the exception of one shaft, entirely valueless. But in G 7330 A, a large amount of pottery was found which corresponded in the types represented to the pottery of the early mastabas in the Western Field, and in particular to the types found in the second addition to Cemetery 4000 (that is, still in the period of Group i). These types, all of which were well represented in the Western Field, are as follows (Figs. 79, 80):

Type A–II b	WSR: wine jar: 7 examples, 34–6–17 d, c
Type A–LI	bag-shaped jar: 1 example, 34–6–17 b
Type B–LIV	two-handled jar: 1 example, 34–6–17 j
Type B–LV	neckless shoulder jar: 1 example, 34–6–17 q
Type C–XXX b	bent-sided bowl with plain rim: 4 examples, 34–6–17 m, n, l, o
Type C–XXXII	round-bottomed bowl with high recurved rim: 3 examples, 34–6–17 p, t, s
Type D–XXXV	basin with roll rim and short tubular spout: 2 examples, 34–6–17 i, k
Type D–XXXVI	basin with recurved rim and long tubular spout: 1 example, 34–6–17 a
Type D–LXXIX a	model basin: 1 example, 34–6–17 r

A few examples will be found listed below which come from the mastabas added to the nucleus cemetery in the Eastern Field of the later part of Dynasty IV, although here again plundering had reduced the pottery to a negligible quantity. No great amount of pottery was found in the later mastabas of Dynasties V and VI in the Eastern Field, although in G 7101 I (Qa'ar) many fragments of round-bottomed bowls present the same forms found also in the Western Field at this time (Dynasty VI). Very little was found in the rock-cut tombs, as these had been occupied as dwelling places or stables and their shafts had been completely cleared out.

GROUP A: JARS WITH ROUNDED OR ROUND-POINTED BASE

The jars include large containers for liquids ('Wine Jars,' Type II), traditional offering jars (Type IV), and various small jars probably used for oils, ointments, and similar substances (Types A–VI, LI, and LVI).

GROUP A. TYPE II

Type A–II b: Jars with short neck, tapering body, bulging shoulder, and rounded base: of DbW(KW), WSR, and RBrW (height ranges from 24 to 40 cm.: also a few small models)

i. *Reign of Cheops to middle of Chephren's reign*

G 1201 A	3 small examples: *Vol. I*, fig. 218, nos. 8, 10. See Fig. 81
G 1203 A	2 examples: *Vol. I*, fig. 220, nos. 5, 9
G 1209 A	1 example: *Vol. I*, fig. 224, no. 1
G 1225 A	1 example: *Vol. I*, fig. 231, no. 7
G 2100 D	fragments: *Vol. I*, p. 419
G 2120 A	11 large examples and 2 models: 33–1–13, 14, 16, 22 to 26, 29; *Vol. I*, fig. 245. See Fig. 81
G 4000	several examples: Junker, *Giza*, I, p. 161
G 4160 A	fragments: *Giza*, I, p. 168
G 4260 A	frags.: *Giza*, I, p. 191
G 4250 A	frags.: *Giza*, I, p. 194
G 4150 A	frags.: *Giza*, I, p. 180
G 4360 A	1 large example and 1 small: *Giza* I, p. 202, fig. 13, nos. 8, 3
G 4460 A	1 example: *Giza*, I, fig. 13, no. 7
G 4450 A	1 example: *Giza*, I, p. 208
G 4140 A	3 large examples: 13–11–52, 53, 63 c; and 3 small: 13–11–13, 27, 28; *Vol. I*, p. 463. See Fig. 81
G 4240 A	5 examples: 13–11–85, 86, 87, 89, 94; *Vol. I*, fig. 282. See Fig. 81
G 4340 A	frags.: 13–10–67 b; *Vol. I*, p. 473
G 4440 A	4 large examples: 13–11–117, 119 to 121; and 2 small: 13–11–111, 113; *Vol. I*, fig. 287. See Fig. 81
G 4540 A	12 examples: 13–2–16 a, 28, 29, 33; *Vol. I*, fig. 289. See Fig. 81
G 4640 A	2 examples: 13–12–24 f, g; *Vol. I*, p. 483
G 4760 A	frags.; *Giza*, I, fig. 13, no. 10
G 5020 Ann. (intrusive)	5 examples: 35–8–10, 12 to 15; *Vol. I*, fig. 283
G 2000 B	2 examples: 35–4–21, 22; *Vol. I*, fig. 237 b
G 7330 A	7 examples: 34–6–17 c–h. See Fig. 80

ii. *Chephren to Neferirkara*

G 4330 A	1 large example: 13–12–3 c; and 1 small: 13–12–3 d; *Vol. I*, p. 486. See Fig. 81
G 4430 A	1 example: 13–12–2 f; *Vol. I*, p. 487
G 4530 A	1 example: 14–1–83; *Vol. I*, p. 490
G 4630 A	5 large examples: 14–1–11, 15, 16, 18, 20; and 1 small: 14–1–23; *Vol. I*, fig. 299. See Fig. 81
G 4520 A	2 examples: 14–4–21, 22; *Vol. I*, fig. 310
G 4620 A	1 example: 14–3–68 d; *Vol. I*, p. 508
G 4720 A	2 examples: 14–3–56, 57 e; *Vol. I*, p. 510
G 4710 A	1 example: 14–3–9; *Vol. I*, p. 524
G 5190 A (equals G 2300 A)	1 example: 12–10–19
G 4940 B	3 examples: 15–1–10
G 2150 A	2 large examples: 33–1–48, 49; and 1 small: 33–1–37; *Vol. I*, fig. 267. See Fig. 81

G 5130 A	1 example: 15–10–2
G 7350 A	5 examples: 28–3–87 a, b. See Fig. 81
G 7530 A	1 small example: 27–6–10. See Fig. 83
G 7560 B	4 large examples: 36–12–14, 17, 19; and 1 small: 36–12–13. Pl. 50 c, 1/1–2, 2/1, 3
G 7810 A	1 small example: 36–1–6. See Fig. 83
G 2210 A	17 examples: 32–10–3, 4, 10, 11, 13, 14; *Vol. I*, p. 435

The jar Type II b developed at the end of Dynasty IV and in early Dynasty V into smaller and more slender forms, and later the neck became more pronounced and longer. By no means all of these forms are slender, some closely resembling in shape the old II b form and some having a considerable bulge at the shoulder. These later variant forms, nevertheless, seem to serve the same purpose as the jars of Type II b and, like these, were generally closed with mud or plaster stoppers. We have seen that a few of the small forms occurred already in Dynasty IV. In Volume I of *A History of the Giza Necropolis*, some of these have been listed under the Mycerinus ovoid form Type VI. However, there is a considerable variation in the ovoid forms V and VI in the Mycerinus Valley Temple, and most of the Giza mastaba vessels seem to be degenerate forms of Type II b. A few clearly ovoid forms have been listed below under A–VI, while Type V has been omitted altogether from the classification here and all late, degenerate forms of Type II b are designated Type A–II c, as follows:

Type A–II c: DbW(KW), WSR, RBrW, FRW, RW, RP

iii. *End of reign of Neferirkara to end of Dynasty V*

G 4220 A	2 examples: 14–4–27, 28. See Fig. 82
G 4422 B	1 example: 38–6–47
G 4733 E	13 examples: 14–12–106, 115, 116, 118, 120. See Fig. 82
G 4734 A	frags.: 14–2–132
G 4813 C	1 example: 15–11–70
G 4833	frags.: 14–2–9 c, d
G 4820 A	1 example: 35–7–18
G 2032 A	1 example: 35–10–40
G 6030 serdab	1 example: 25–11–50. See Fig. 82
G 6040 D	1 example: 25–12–69. See Fig. 82
G 2175 D	1 example: 13–1–504. See Fig. 82
G 2330 A (equals G 5380 A)	10 examples: 12–10–31, 39 to 46, 52. See Figs. 82, 83
Street 7400	1 example: 25–1–797

iv. *Dynasty VI*

G 2006 A	4 examples with plaster stopper: 36–3–60 to 63
G 2017 B	1 example: 37–9–7
G 2037 b X	4 examples: 38–5–3
G 2132 B	1 example: 36–4–30
G 2356 A	1 example: 13–11–507. See Fig. 83
G 2379 A	1 example with hieratic inscription: 35–7–22. See Fig. 84
G 2381 X	2 examples: 12–12–188, 13–1–508. See Fig. 83; Pl. 50 b, 2/4
G 2387 A	1 example: 35–7–16, with hieratic inscription giving short label of contents (?). See Fig. 83
G 2413 B	1 example: 13–1–511. See Fig. 83
G 4512 A, B	2 examples: 15–12–71, 35–8–2. See Fig. 83
G 4812 D	1 example: 35–11–88
G 5221 A	8 examples: 14–12–29 to 36. See Fig. 83; Plate 50 a, 1/2–5, 2/1–2
G 5223 A	1 example: 14–12–75. See Fig. 83
G 5232 A	10 examples with plaster and mud stoppers: 14–11–159 to 164, 166, 167, 169, 170. See Fig. 83; Pl. 50 a, 1/1, 2/3–4

GROUP A: TYPE IV. ORDINARY TRADITIONAL OFFERING JAR

The traditional offering jar, apparently originally a beer jar, was in general use in Dynasty III as part of the grave equipment of even modest graves (see Reisner, *Naga-ed-Dêr*, III, 1932, p. 75). In the early mastabas of the three nucleus cemeteries of the Western Field very few examples were found. The same was true of the mastabas of the Eastern Field and in general the form is infrequent in the burial chambers of the Old Kingdom. Many were recorded in the Mycerinus Valley Temple (Reisner, *Mycerinus*, p. 212, fig. 64), and masses of the jars were found in the filling of the later mastabas in the Western Field. The jars appeared frequently in the streets of the Eastern Field, and it is probable that the later mastabas had originally contained jars in the upper part of the filling of the superstructures which are now destroyed. A great number of these jars were used in the periodic chapel services. The vessels discarded from the chapel service seem then to have been used in the filling of the later tombs and when fragments occur in the filling of plundered shafts it probably means that they were intrusive. However, a few examples of these jars were found in the burial chambers of the Dynasty V mastabas in the Eastern Field. Some of these are illustrated in Fig. 85 with a few of the jars which were recovered from the debris of the streets.

The jar of Type IV is one of the cheapest vessels found at Giza and more carelessly made than many of the small models. Many of those discarded from the periodic chapel services were reused for carrying mud or plaster. They appear in a variety of forms as is usual in a vessel made cheaply for funerary purposes. All are of coarse red ware or brown ware, made on the wheel but marked by fingerprints. The lower part is often roughly dressed with a blade. In *Mycerinus*, the type was subdivided into five variations: (a) tall jars with roll rim, (b) tall jars without roll rim, (c) short jars with roll rim, (d) short jars with rim faintly indicated by horizontal finger mark around the open mouth, and (e) short jars with plain open mouth. These are the main forms, but intermediate forms occur, and there are also variations in the maximum diameter from fat to slender jars. Here no attempt has been made to distinguish between the variations in these crudely made jars and all are listed simply under Type IV:

Type A–IV

i. *Cheops to mid-Chephren*

G 2120 A	frags.: 33–1–28; *Vol. I*, fig. 245
G 4150 A	frags.: Junker, *Giza*, I, p. 181
G 4340 A	frags.: 13–10–67 c; *Vol. I*, p. 473
G 4640 A	2 examples: 13–12–23, 27; *Vol. I*, p. 483

ii. *Chephren to Neferirkara*

G 2210 A	8 fragmentary examples: 32–10–12, 5–7; *Vol. I*, p. 435
G 4341 A	1 example: 14–1–96
G 4631 A	1 example: 14–1–48; *Vol. I*, fig. 304 c
G 1457 A	1 example: 34–11–3
G 1407 A	1 example: 34–12–1

iii. *End of Neferirkara to end of Dynasty V*

G 1111 B	2 examples: 34–12–26, 30
G 1158	1 example: 35–1–14
G 1160 B	2 examples: 35–1–22, 23
G 2009 P	1 example: 37–10–36
G 5040 Y	1 example: 35–8–56
G 6040 B	3 examples: 25–12–68 a, b, 122
G 6030 B	2 examples: 25–11–82, 85
G 6020 A	7 or more jars: 25–12–27, 45, 78, 1110, 1111
G 6010 A	2 examples: 25–12–72, 106
G 6028 E	1 example: 25–12–221
G 6031 D	2 examples: 25–12–130, 131
G 6013 C	1 example: 25–11–96
G 6012 A	4 examples: 25–12–282
G 7714 Y	1 example: 37–5–99
G 7421 A	1 example: 25–12–134. See Fig. 85
G 7253 A	1 example: 27–1–125
G 7161 A	1 example: 26–3–22. See Fig. 85
G 7766 Z	1 example: 29–12–234. See Fig. 85
G 7789 J	1 example
Streets in Eastern Cemetery	6 examples: 25–12–295, 27–3–787, 27–5–103, 28–4–110, 30–12–14, 30–12–91. See Fig. 85

iv. *Dynasty VI*

G 1362 A	2 examples: 35–2–8, 9
G 2026 B	1 example: 37–10–27
G 5564 D, E (former G 2347 a D, E)	2 examples: 35–11–34, 35

GROUP A: TYPE VI. OVOID OR GLOBULAR JARS WITH ROUNDED BASE

The medium-sized and small jars used for beer and similar liquids are not numerous in this ovoid or globular form. The ware is generally red ware or red brown ware of good quality, finished with a red wash and in some cases polished. All but one have a ledge rim and several have a higher neck. One group has a rare example of decoration by scoring concentric circles around the base of the neck, above the low shoulder (see also G. Brunton, *Qau and Badari*, II, 1928, pl. LXXIX, nos. 60 F, N, S–W, and *Matmar*, pl. XXIX, no. 4).

Type A–VI

i. *Cheops to mid-Chephren*

G 4340 A	1 example: 13–10–52; *Vol. I*, fig. 285. See Fig. 86

ii. *Chephren to Neferirkara*

G 2300 A (equals G 5190 A)	1 example: 12–10–72. See Fig. 86; Pl. 50 b, 3/1

iii. *End of Neferirkara to end of Dynasty V*

G 4421 A	1 example (with longer neck and no rim): 38–6–42. See Fig. 86
G 2370 A	9 examples, with neck and rim; scored lines on shoulder: 35–7–23. See Fig. 86; Pl. 55 c

iv. *Dynasty VI*

G 2381 Z	1 example: pot mark on shoulder: 12–12–161. See Fig. 86

GROUP A: TYPE LI. THE BAG-SHAPED JAR

The bag-shaped jar was found in large numbers of various sizes in the Hetep-heres tomb and occurred in a few examples in the early mastabas of the Western Field. Only one example was found in one of the eight twin-mastabas of the Eastern Field. The ware was RBrW, RW, FRW, and RP.

Type A–LI a: With clearly marked rim and angle where sides join base

i. *Cheops to mid-Chephren*

G 2120 A	1 example: 33–1–11; *Vol. I*, fig. 245. See Fig. 87
G 4140 A	1 example: 13–11–45; *Vol. I*, p. 463
G 4240 A	1 example: 13–11–84; *Vol. I*, fig. 282. See Fig. 87
G 4440 A	2 examples: 13–11–103, 123; *Vol. I*, fig. 287. See Fig. 87
G 4540 A	1 example: 13–12–22 d; *Vol. I*, fig. 289
G 7330 A	1 example: 34–6–17 b. See pottery group in Fig. 79

ii. *Chephren to Neferirkara*

G 2180 A	1 example: 33–1–33

iii. *End of Neferirkara to end of Dynasty V*

G 5031 A	1 degenerate form: 15–10–3. See Fig. 87

Type A–LI b: Rounded form

ii. *Chephren to Neferirkara*

G 4940 B	1 example: 15–1–11. See Fig. 87

Type A–LI c: Wide rounded form without rim

i. *Cheops to mid-Chephren*

G 5020 Ann. 1 example: 35–8–9. See Fig. 87 (intrusive)

GROUP A: TYPE LVI COLLAR JARS WITH TAPERING BODY AND ROUND-POINTED BASE

The collar jar occurs in two forms both in stone and pottery. In pottery the flat-bottomed form is labeled B–LVI, and the round-pointed form A–LVI. Neither type occurs in the Hetepheres tomb, but seven examples of Type A–LVI were found in the Giza mastabas. The ware is RBrW except in the case of the example from G 4140, where it is BrW. The two from G 4140 and G 4440 seem to be practical vessels with a height respectively of 14 and 17·8 cm. The others are models. All but one occur in the early mastabas. The contour of the collar varies, showing a high and a low form.

Type A–LVI

i. *Cheops to mid-Chephren*

G 4140 A	1 example: 13–11–26; *Vol. I*, fig. 279. See Fig. 88
G 4540 A	1 example: 13–12–22 e; *Vol. I*, fig. 289. See Fig. 88
G 4440 A	1 example, 13–11–101; *Vol. I*, fig. 287. See Fig. 88
G 4340 A	3 examples: 13–10–27, 38; 13–11–101; *Vol. I*, fig. 285. See Fig. 88

iii. *End of Neferirkara to end of Dynasty V*

G 4734	1 example: 14–2–129

GROUP B: JARS WITH FLAT BASE

The flat-bottomed jars present a variety of forms and sizes, as do the jars with rounded bottoms. The large jars are represented mainly by the foreign two-handled jars which Reisner has listed as Type B–LIV. These jars have a broad stable base. The other flat-bottomed jars are of medium or small size, and many of them clearly are models. Some of these forms have practical stable bases, but others have narrow bases which would have required the use of a jar-stand. The models in general have a splay foot to widen the base and give stability without using a jar-stand. The types included in Group B are as follows:

Type B–LIII: The one-handled jug
  a. one-handled pitcher with open spout
  b. one-handled jug with long neck and handle joining either at rim or some distance below rim
Type B–LIV: The two-handled oil jar

These two types are practical vessels of special imported ware, all showing white specks in the fracture. The types which were represented by practical vessels and models of RW, RBrW, RP, DbW, and WSR are:

Type B–VI	medium and small jars with ovoid body, corresponding to Type A–VI, but with flat base
Type B–XVIII	medium and small shoulder jars, corresponding to Type A–II c
Type B–XIX	squat shoulder jars
Type B–LV	neckless shoulder jar
Type B–LI	bag-shaped jar
Type B–LVI	collar jar
Type B–LIX	jar with long neck, with or without spout rising vertically

The types which are only represented by large models of RW and BrW are:

Type B–LVII	cylindrical jar, imitation of stone forms, Type I
Type B–LVIII	barrel jar with cord net and splay foot, imitation of stone forms of Type V

In Volume I of *A History of the Giza Necropolis* the Mycerinus Types XVII and XVIII have been used to designate examples listed below under Types VI and XVIII. Type XVII is represented in the Mycerinus Valley Temple by only one example of a shoulder jar with high neck and spreading mouth which does not resemble any of the vessels listed below. It seems better, therefore, to introduce Type VI for the ovoid jar which so much resembles its round-bottomed counterpart Type A–VI (although no flat-bottomed examples of this vessel occurred in the Mycerinus Valley Temple). It is therefore listed as Type VI and not Type XVII c, as in *Vol. I.* The other shoulder jars are now all included under Type XVIII, except for the squat form which corresponds to the Mycerinus Type XIX.

GROUP B: TYPE VI. MEDIUM AND SMALL JARS WITH OVOID BODY, CORRESPONDING TO TYPE A–VI, BUT WITH FLAT BASE

i. *Cheops to mid-Chephren*

G 2120 A	1 example, RBrW: 33–1–9; *Vol. I*, fig. 245. See Fig. 89
G 4140 A	1 example, RP: 13–11–12; *Vol. I*, fig. 279. See Fig. 89
G 4340 A	1 example, RP: 13–10–26; *Vol. I*, fig. 285

ii. *Chephren to Neferirkara*

G 4530 A	1 example, 14–1–74; *Vol. I*, Fig. 297 a. See Fig. 89

iii. *End of Neferirkara to end of Dynasty V*

G 1011 P	2 examples, WSR: 13–1–501, 502. See Fig. 89

GROUP B: TYPE XVIII. MEDIUM AND SMALL SHOULDER JARS, CORRESPONDING TO TYPE A–II C, BUT WITH FLAT BASE

Type B–XVIII a: With well-defined neck

i. *Cheops to mid-Chephren*

G 1201 A	6 examples, RBrW, RP; *Vol. I*, fig. 218. See Fig. 90
G 1203 A	2 examples, DbW: *Vol. I*, p. 391, nos. 6, 7
G 4650 A	1 example, RP: Junker, *Giza*, I, p. 227

G 4440 A	1 example, FRW, red wash: 13–11–112; *Vol. I*, fig. 287. See Fig. 90
G 4140 A	3 examples, RP: 13–11–14, 15, 63 e; *Vol. I*, fig. 279. See Fig. 91

ii. *Chephren to Neferirkara*

G 4630 A	4 examples, RBrW: 14–1–8, 19, 22, 26; *Vol. I*, fig. 299. See Figs. 90, 91
G 4530 A	2 examples, RBrW: 14–1–75, 77; *Vol. I*, fig. 297 a. See Fig. 91
G 1457 A	1 example, WSR: 34–12–19. See Fig. 91

iii. *End of Neferirkara to end of Dynasty V*

G 2132 B	1 example, DbW: 36–2–16

Type B–XVIII b: Rudimentary neck with roll rim

ii. *Chephren to Neferirkara*

G 4410 A	1 example, RP: 15–12–65; *Vol. I*, fig. 318. See Fig. 92
G 4840, subsidiary shaft 984	2 examples; Junker, *Giza*, I, fig. 13 and p. 256. See Fig. 92
G 4860 northern shaft	1 example; *Giza*, I, fig. 60 and p. 248. See Fig. 92

Type B–XVIII c: Jar with neck and flaring sides

ii. *Chephren to Neferirkara*

G 5080 B (former G 2200)	1 incomplete fancy form, BrW: 33–2–122. See Fig. 91

GROUP B: TYPE XIX. SMALL FLAT-BOTTOMED JARS WITH SHORT NECK AND BROAD SHOULDER: SQUAT FORMS

Type B–XIX is an uncommon form widely distributed in the Old Kingdom in time and locality. The examples with a high shoulder, as in G 4733 E, are hard to distinguish from such forms as B–XVIII, as in G 1201, no. 4. It has, however, a wider base.

Type B–XIX

i. *Cheops to mid-Chephren*

G 1201 A	1 example, RP: *Vol. I*, fig. 218, no. 17. See Fig. 93
G 4440 A	3 examples, RP: 13–11–114, 115, 116; *Vol. I*, fig. 287. See Fig. 93

ii. *Chephren to Neferirkara*

G 1457 A	1 example, RW: 34–12–21 a. See Fig. 93

iii. *End of Neferirkara to end of Dynasty V*

G 4733 E	50 examples, RP: 14–12–121. See Fig. 93
G 1674 C	1 example, BrW: 32–4–23. See Fig. 93

GROUP B–LI. BAG-SHAPED JAR WITH FLAT BOTTOM

The true bag-shaped jar as found in the Hetep-heres tomb is listed as A–LI a. It virtually disappeared after Dynasty IV, only one example being found in early Dynasty V and a degenerate example late in Dynasty V. A few degenerate examples with flat bottoms are listed as B–LI as follows:

ii. *Chephren to Neferirkara*

G 4620 A	1 example, RBrW: 14–3–65; *Vol. I*, fig. 312. See Fig. 94
G 4720 A	1 example, RBrW: 14–3–34; *Vol. I*, fig. 314. See Fig. 94

iii. *End of Neferirkara to end of Dynasty V*

G 2409 B	1 model, RW: 13–1–510. See Fig. 94; Plate 50 b, 1/2
G 7650 W	1 example, RW: 29–4–124

GROUP B: TYPE LIII. ONE-HANDLED JUG

This type has been discussed above in connection with the example found in the Hetep-heres tomb, where it was seen that the ware with the white specks in its fracture resembles the foreign ware of Type B–LIV. The shapes of these one-handled vessels also indicate a Syrian or Palestinian origin. Neither Type B–LIII nor B–LIV is an Egyptian type, although we have seen that the early imported forms were imitated by the Egyptians in stone, particularly in the commonly occurring little ointment jar of stone Type XIV.

Two of the pottery one-handled vessels are in the form of a pitcher with open spout and are listed as B–LIII a. The present location of the fragmentary example from G 1412 A (Fig. 95; Pl. 51 g) is unknown so that it cannot be re-examined at present. It appears, however, to be identical with the complete example from G 1233 Annex (Fig. 95; Pl. 53 f). I am told that the latter represents a degenerate version of the reserved-slip ware known at an early period in northern Syria,[2] and found as a possibly imported form and ware in Cilicia at Tarsus. The vessel is handmade and was covered with a cream-colored slip which was wiped off in horizontal lines around the shoulder of the vessel, producing striations in the soft clay. The form of the vessel is close to an Early Bronze pitcher (but of red polished ware) found at Ay (*Syria*, 16, 1935, p. 345, no. 42, pl. LVIII); so it would seem that similar vessels occurred also in Palestine.

Since the date of this vessel should be important for comparative chronology, it might be well to state again (see *Vol. I*, pp. 408–411) the circumstances in which it was found in an undisturbed burial in the northern addition to the mastaba G 1233. These additions (called 'Annex' by Reisner) to mastabas in the nucleus cemeteries of the Western Field form part of a general scheme, toward the end of the reign of Cheops, of altering the early tombs to conform to the two-shaft mastaba type initiated in the great twin-mastabas of the Eastern Field. In Cemetery G 1200 the burial chamber in the Annex is never as large or as well finished as the earlier principal shaft, and was evidently intended for the wife. In G 1233 Annex, a woman's body was found in a collapsed coffin in a small and irregularly cut chamber. The blocking appeared to be intact, although there had been a fall of rock from the roof near the entrance. The shaft had been filled with clean sand before the filling of the addition to the mastaba was put in.

---

[2] Robert J. Braidwood, *Mounds in the Plain of Antioch*, Oriental Institute Publications, XLVIII (1937), p. 7.

It would seem, then, that the wife of the owner of G 1233 died while the addition was being made to the tomb and that her burial place was cut as hastily as possible. The small stepped masonry of the addition is exactly like all other work of this sort executed in the reign of Cheops, and there seems no reason to doubt that the pitcher placed in this tomb was imported into Egypt before the end of that king's life. The second pitcher from G 1412 A must be somewhat later in date. The tomb is one of the large brick mastabas that were added early, to the west of the nucleus cemetery 1200, and Reisner dates the group to the period of late Dynasty IV to early Dynasty V. We have seen in Chapter VI that Junker has disagreed with the dating of these tombs on the basis of the sealing of Mycerinus found in G 1457. An attempt has been made in that chapter to show, however, that Reisner's assignment of this date is eminently plausible. In the case of these pitchers, we must say that they have a range in date from Dynasty IV into Dynasty V.

The five one-handled jugs have been given the subtype B–LIII b. They present small variations, but all except the one from G 1220 A, where the plaster stopper makes it impossible to be certain, are of the form with the handle attached a little below the rim. They have been discussed already in connection with the Hetep-heres example which they closely resemble in form and ware.

Type B–LIII a: One-handled pitcher

i. *Cheops to mid-Chephren*

G 1233 Annex A	No. 1 (MFA 20. 1904), special ware, cream slip; mouth with plain rim bent out in three lips, a trefoil form, the front lip forming a spout; handle attached to back of mouth and to body; squat bulging form with wide flat base; height 30 cm., maximum diameter 23·5 cm.; *Vol. I*, fig. 234 c. See Fig. 95 and Pl. 53 f

ii. *Chephren to Neferirkara*

G 1412 A	Nearly complete small example in two pieces, similar to that from G 1233. See Fig. 95 and Pl. 51 g

Type B–LIII b: One-handled jug with well-formed neck and roll rim

i. *Cheops to mid-Chephren*

G 4340 A	2 examples; special ware, cream slip, pebble burnished, rim missing but handle joins below rim; molded cord at base of neck: 13–10–68 (height 34 cm.; Fig. 95; Pl. 53 c). This vessel has a shorter handle and a broader base than the somewhat smaller example: 13–10–25 (MFA 20. 1899) which is 25·5 cm. high (Fig. 95; Pl. 53 f, 1/3). *Vol. I*, fig. 285
G 1233 Annex A	No. 2 (MFA 20. 1905); special ware, cream slip, molded cord around base of neck, height 33 cm. In *Vol. I*, fig. 234 c, the narrow, flat base was drawn mistakenly as rounded. This has now been corrected in Fig. 95. In this drawing and in Pl. 53 f, 1/2, it is clear that the handle joins beneath the rim on the neck

ii *Chephren to Neferirkara*

G 2170 A	1 incomplete example: 32–12–13; special ware, burnished red wash; handle probably joined below rim as restored in Fig. 95. See Pl. 53 f, 1/4. Published in *Vol. I*, fig. 274

iii. *End of Neferirkara to end of Dynasty V*

G 1220 A	1 example of special ware. This piece is only known to me from the photographs on Pl. 52 b, c, where it appears that this may be another example of degenerate reserved slip technique. Although the horizontal lines sink into the clay in wide stripes, there is a closer resemblance to reserved-slip than there is to the combed surface decoration found on the jars of Type B–LIV. With the plaster stopper in place it is hard to determine whether the handle joined the rim as it certainly appears to do. Height 27 cm. See Pl. 52 b, c

GROUP B: TYPE LIV. TWO-HANDLED 'OIL JAR' WITH FLAT BOTTOM, WELL-FORMED NECK AND ROLL RIM

Reisner first published one of these jars in the *Bulletin of the Museum of Fine Arts*, vol. XIII (1915), p. 36, fig. 15, suggesting their foreign origin. Junker then discussed the type thoroughly on the basis of examples found by him at Giza, calling attention to foreign parallels of an earlier period (*Giza*, I, 1929, 119–126). Since that time Jéquier found a few Dynasty VI examples in the tombs around the pyramid of Pepy II (*Fouilles à Saqqarah, Tombeaux de particuliers*, 1929, pp. 14, 26) and a somewhat similar jar of alabaster which looks as though it might have been copied from this form (G. Jéquier, *Fouilles à Saqqarah, Le Monument funéraire de Pepy II*, I, 1936, 7). Selim Hassan found one example in his Shaft 294 which would seem to be of Dynasty V (*Excavations at Giza, 1930–1931*, p. 146, fig. 173). The only other example known to me from elsewhere in Egypt is the jar found by Brunton in a grave which he dated to Dynasty IV (*Matmar*, 1948, p. 45, pl. XXXVII). He describes this as being red ware with a cream slip, and therefore similar to the other known examples. It also had a combed decoration of horizontal and vertical lines, as do the other examples of Type B–LIV. Brunton observed that the vertical combing was applied before the long horizontal lines were scored in the clay. The early examples from the Harvard-Boston excavations are published in Reisner's *A History of the Giza Necropolis*, vol. I, as noted in the list below.

The ware of these vessels varies considerably in the color of the surface (red brown to gray) and also in the color of the fracture, which is brown, dark gray, or reddish. A common characteristic is the minute white specks showing in the fracture. The combed decoration was applied before the thick creamish slip was laid on. In many cases this slip was pebble burnished. Reisner noted that in some cases the combed decoration was nearly obliterated by the slip. Reisner also states that the vessels were wheel-made and the handles separately made and inserted in the walls of the body before drying. As in the case of Type B–LIII, the shape and ware of these vessels have always been considered un-Egyptian, and comparison has been made to the similarly foreign-looking two-handled and one-handled vessels found in the graves of Dynasty I.

The use of combed decoration is now known from a number of sites in Syria and Palestine, as, for example, at Byblos where it appears on very small two-handled jars (8 to 14 cm. high; M. Dunand, *Fouilles de Byblos*, I, 1937–1939, pls. LXXVIII–IX), but the closest parallel to our jars seems to be the combed ware two-handled jars at Megiddo which have a time range from Dynasty I into the Old Kingdom (G. M. Shipton, 'Notes on the Megiddo Pottery of Strata VI–XX,' *Studies in Ancient Oriental Civilization*, 17, p. 4 and chart: Strata XVIII, 8, Strata XVI–XVII, 7. Compare also: *S.A.O.C.*, 10, fig. 4 and chart). Similar also are the combed-ware jars, without handles, at Ras Shamra, illustrated by Schaeffer in his *Stratigraphie comparée*, p. 402, fig. 28, which he dates to the First Intermediate Period.

Reisner believed that the jars found at Giza were used as containers for olive oil or cedar oil. The jars from G 2140 A (32–12–18) and G 2350 L (40–5–7) listed below both contained a dried resinous substance. Mr. Lucas analyzed a sample from the first of these jars (G 2140 A) and reported that the material was 'a fragrant resin, a true resin as distinguished from fragrant gum resins, such as frankincense and myrrh. It is almost certainly from a coniferous tree, and from Western Asia, that is from Syria or Asia Minor.' In the same letter, dated in December 1939, Mr. Lucas went on to say: 'I would suggest, first, that the tree from which the resin was derived was either fir (possibly Cilician Fir, which grows both in Syria and Asia Minor: *Abies cilicica*) or pine (possibly the Aleppo pine, *Pinus halepensis*, which is the commonest pine in the Mediterranean region); second, that the material is what the Egyptians called "*ach*-resin".' In the third edition of his *Ancient Egyptian Materials and Industries* (1948), p. 370, Lucas again discusses the sample from G 2140 A. Here, although he states his conclusions somewhat more cautiously, he retains the same opinion: 'Manifestly, therefore, it was a true resin from a coniferous tree and possibly *ach*-resin.'

It might be remarked that the character of the vessels and their size suggest that the material they contained was in liquid form. The care which had been taken to seal several of them would suggest that the liquid may have had to be protected from evaporation as well as from the intrusion of dirt. Brunton's example had a piece of leather over a potsherd closing the mouth inside the plaster stopper. It would, therefore, seem possible that the resin was mixed with some other substance to form a fragrant oil.

The cylinder seal impression which appears on the shoulder of one of these jars provides one more piece of evidence of foreign origin. This accords well with the Syrian source suggested by their contents and the evidence of their form. Several of the jars have incised pot marks, and one a curious raised design on the shoulder (Pl. 53 d; Fig. 80), but the jar from G 2370 B bears the impression of a seal which has been rolled over the clay when soft (after the application of the combed decoration). The design consists of a row of three animals proceeding to the right. They have big ears, apparently open mouths, and long tails curled back over their bodies. This seal impression undoubtedly belongs to a group of similar designs impressed upon pottery which have been found at Byblos, Tell el Judeideh, and Hama in Syria, at Megiddo and Jericho in Palestine, at Tarsus in Cilicia, Tell Mak in the Khabur Valley, and at Tell Djamid in Transjordan. They have been discussed by H. Frankfort in his *Cylinder Seals* (1939), pp. 230 ff., by Dunand in *Byblia Grammata* (1945), pp. 59–69, and by Engberg and Shipton in 'Notes on the Chalcolithic and Early Bronze Age Pottery at Megiddo,' *Studies in Ancient Oriental Civilization*, 10 (1934), pp. 31–39. In addition to the references given in these publications, two seals from Tarsus are shown in *American Journal of Archaeology*, 44 (1940), p. 75, fig. 27, and examples from Hama in H. Ingholt's *Rapport préliminaire . . . de fouilles à Hama* (1940), pp. 42–43, pl. XIV. The Tarsus examples and the sherd from Byblos No. 3232 (Dunand, *Fouilles de Byblos*, I, 1937–1939, p. 218, pl. CXXXIII) show clearly combed markings on the pottery. Frankfort and Engberg and Shipton compare the impressions to Mesopotamian seals of the Early Dynastic Period, while Dunand's evidence of the position in which the seal impressions were found at Byblos suggested that they belonged to the first period of the town settlement at that site, before the time of Khasekhemuwy. The evidence from Hama indicates that they were used also at a later time, well into the Old Kingdom.

Our example from G 2370 B is important in this connection, since it comes from the burial chamber of the Vizier of Isesy, Senezem-ib Yenty, who has been mentioned a number of times in Chapter VI. The family complex of tombs commenced by Yenty continued well into the reign of Pepy II. His son Mehy succeeded to the vizierate under Unas, and it is probable that Yenty died early in this reign. His burial chamber is the first one known with walls inscribed with offering lists, and it has been suggested that these imitate the first use of inscriptions in a king's burial chamber: the Pyramid Texts in the tomb of Unas, the last king of Dynasty V.

TYPE B–LIV. TWO-HANDLED 'OIL JAR' OF SPECIAL WARE: HEIGHT RANGES FROM 23 TO 43 CM., ALL WITH COMBED-WARE DECORATION, USUALLY BOTH IN HORIZONTAL AND VERTICAL LINES

i. *Cheops to mid-Chephren*

G 4140 A	4 examples: 13–11–57, 61 to 63. No. 62 has a ring of incised marks around the base of the neck evidently imitating a cord. *Vol. I*, fig. 279
G 4240 A	2 examples: 13–11–64, 65; *Vol. I*, fig. 282

G 4340 A	1 example: 13–10–29; *Vol. I*, fig. 285. See Fig. 96
G 4440 A	3 examples: 13–11–106, 107, 108; *Vol. I*, fig. 287
G 4760 A (VII N)	4 examples: Junker, *Giza*, I, fig. 13, nos. 16, 17; fig. 14, nos. 8, 9; pl. XLIII b, 1/2–3
G 5020 Annex	2 examples: 35–8–8, 11; *Vol. I*, fig. 283. See Pl. 51 c
G 7330 A	1 example, molded mark on side: 34–6–17 j. See Fig. 80 and Pl. 53 d (Boston)

ii. *Chephren to Neferirkara*

G 4430 A	1 example: 13–12–2 a; *Vol. I*, p. 487
G 4530 A	1 example: 14–1–82; *Vol. I*, fig. 297 a (MFA 20. 1881)
G 4630 A	2 examples, one with pot mark: 14–1–10 (Boston) and 14–1–14 (MFA 20. 1889), *Bulletin MFA*, 13 (1915), p. 36; *Vol. I*, fig. 299, pls. 61 d, 63 d. See Fig. 97
G 4620 A	1 example: 14–3–67; *Vol. I*, fig. 312
G 4410 A	1 example: 15–12–67; *Vol. I*, p. 516
G 4860 N	2 fragments: Junker, *Giza*, I, p. 248
G 2140 A	1 example: 32–12–18; *Vol. I*, fig. 256 (Boston)
G 4940 A, B	fragments: 15–1–9, 15–11–36, 37 a; those in B intrusive (?)
G 7650 C	1 example, upper part: 29–3–256. See Fig. 97
G 7550 B	1 example (frags.): 28–5–190
G 7560 B	3 to 4 examples in frags.: 36–12–15, 16. See Fig. 97; Pl. 51 a
G 1031 A	1 example: see Fig. 96 and Pl. 51 d
G 4970 A	1 example: Junker, *Giza*, I, fig. 14, no. 11, pl. XLIII b, 1/1

iii. *End of Neferirkara to end of Dynasty V*

G 2175 B	1 example: 13–1–506. See Fig. 96 and Pl. 51 i
G 2350 L	1 example with pot mark: 40–5–7. See Fig. 97 and Pl. 52 f (Boston)
G 1224 A	1 example: see Fig. 97 and Pl. 51 b
G 2430	1 example, lower part: 39–5–47. See Pl. 51 f
G 2370 B	1 example with seal impression: 35–7–41. See Fig. 98 and Pl. 53 a, b (Boston)

iv. *Dynasty VI*

G 2450	2 fragmentary examples: see Pl. 51 h
G 2379 A	1 example: see Fig. 97 and Pl. 53 e
G 2387 A	1 example, plaster stopper: 35–7–7. See Fig. 98 and Pl. 51 e (Boston)
G I–S: Ithy	1 example: Junker, *Giza*, I, fig. 14, no. 12; *Vorbericht*, 1928, p. 192
G 2381 A	5 examples: 1 with mud stopper (with seal impression of Pepy II): 12–12–571 (MFA 13. 2932); 2 with plaster stoppers: 12–12–572, 573 (MFA 13. 2928, 2931); 2 without stoppers: 12–12–569, 570 (MFA 13. 2929, 2931). The last two jars have incised marks around the neck imitating rope. See Fig. 96 and Pl. 52 a, d, e, g

GROUP B: TYPE LV. NECKLESS SHOULDER JAR WITH BAND RIM AROUND MOUTH

The neckless shoulder jar, Type B–LV, was one of the most frequent types found in the Hetep-heres tomb. It occurred there in graduated sizes ranging from about 25 cm. to less than 10 cm. in height. The smallest examples were obviously models but could not be distinguished except arbitrarily by size from the larger vessels. The type occurred in large and small sizes in the early mastabas of the Western Field with a preponderance of small forms which may be counted as models. In the Eastern Field there were only two examples, which were found in G 7330 A. The type practically disappears at the end of Dynasty IV. By that time a small degenerate model had been developed with an exaggerated splay foot, and examples of this degenerate model continued to occur in Dynasties V and VI.

The form of this vessel appears to be related to a metal vessel. The copper ewer is of the same form except that it had a spout. One model in pottery of a ewer and basin was found by Junker in G 4360 (*Giza*, I, fig. 15, no. 1), although the simplified model shows no band rim on the ewer. Functionally the pottery jars of Type B–LV are not connected with the copper ewer but with the stone vessels of Types IV and V used as containers of oils and ointments.

The ware is the red brown ware finished in different ways: (1) simply smoothed, (2) with red wash, (3) red polished, or (4) in a few cases with a light colored slip (WSR).

Type B–LV a: Practical examples and large models. (*All RBrW unless otherwise stated*)

i. *Cheops to mid-Chephren*

G 1201 A	3 examples and one model: *Vol. I*, fig. 218, no. 11. See Fig. 99
G 2120 A	1 model: 33–1–10: *Vol. I*, fig. 245
G 4360 A	2 models: Junker, *Giza*, I, fig. 15, nos. 13, 16
G 4560 A	1 model: *Giza*, I, fig. 15, no. 14
G 4450 A	1 model: *Giza*, I, fig. 15, no. 12
G 4140 A	3 examples: 13–11–11, 43, 46; *Vol. I*, fig. 279
G 4240 A	3 examples: 13–11–82; *Vol. I*, fig. 282
G 4340 A	1 example and 7 models: 13–10–35 to 37, 39, 40, 42, 47 (RP), 56; *Vol. I*, fig. 285
G 4440 A	5 models: 13–11–104, 114 (RP), 115, 123 j; *Vol. I*, fig. 287. See Fig. 99
G 4540 A	4 models: 13–12–16 c, 22 c; *Vol. I*, fig. 289
G 4640 A	5 models: 13–12–24 c; *Vol. I*, p. 483
G 7330 A	2 examples: 34–6–17 q. See Fig. 79

ii. *Chephren to Neferirkara*

G 4720 A	1 jar and 4 models: 14–3–35, 36, 45 (RP); *Vol. I*, fig. 314. See Fig. 99

G 4710 A	2 examples (RP): 14–3–5; *Vol. I*, fig. 325
G 2150 A	1 example (RP): 33–1–34: *Vol. I*, fig. 267
G 5080 C (G 2200 C)	1 example (RP): 33–1–59 d. See Fig. 99, Pl. 54 a, 4/2
G 4920 A	1 example: 15–11–43
G 1457 A	2 examples (RW): 34–11–8, 34–12–21 d.
G 5190 A (old number G 2300)	1 example (RP): 12–10–15. See Fig. 99, Pl. 50 b, 3/4
G 4341 A	4 examples (RP): 14–1–91, 94. See Fig. 99
G 4631 B	4 examples (RP): 14–1–45; *Vol. I*, fig. 304 c

iii. *End of Neferirkara to end of Dynasty V*

G 4813 C	1 example (RP); 15–11–71

There are few examples of pottery in Dynasties V–VI, but in the intact tomb of Impy (G 2381 A) there were a number of copper models of the same form as the old models listed above. A special type of pottery model developed early (examples listed below in Cemetery 4000). This form (B–LV b) had a splay foot to give it stability but degenerated rapidly to a form which can be recognized only by comparison with the old models.

Type B–LVb: Small models of neckless shoulder jar with splay foot

i. *Cheops to mid-Chephren*

G 4360 A	1 model: Junker, *Giza*, I, fig. 15, no. 18
G 4240 A	1 model (RW): 13–11–79; *Vol. I*, fig. 282. See Fig. 100
G 4640 A	3 models (RW): 13–12–25 a; *Vol. I*, fig. 291

ii. *Chephren to Neferirkara*

G 7510	1 model: 25–2–1237. See Fig. 100
G 4520 A	9 models (RW): 14–4–15, 19; *Vol. I*, fig. 310. See Fig. 100
G 4720 A	4 models: 14–3–39; *Vol. I*, fig. 314. See Fig. 100
G 4510 A	2 models (RW): 15–12–43; *Vol. I*, fig. 321
G 7560 B	1 model (RW): 36–12–35. See Fig. 100
G 7650 C (debris of chapel)	16 models: 29–2–42 to 46. See Fig. 100
G 1457 A	1 model: 34–12–21 d

iii. *End of Neferirkara to end of Dynasty V*

G 4220 A	5 models: 14–4–34. See Fig. 100
G 4733 E	3 models (RW): 14–2–123. See Fig. 100
G 6030 B	1 model: 25–11–89. See Fig. 100
G 6034 R	6 models (RW): 25–12–145 to 149. See Fig. 100
G 1011 P	several models (RW): 13–1–503. See Fig. 100
G 4511 H	8 models (RW): 35–11–79–81. See Fig. 100
G 1370 A	4 models: 35–2–29. See Fig. 100
G 2184 G	23 models (RW): 35–9–64. See Fig. 100
G 2196 D	39 models (RW): 35–10–18 c, d
G 2416 D	4 models (RW): 36–7–30
G 7140 X	1 model: 37–1–4
G 7112 A	28 models (RW): 25–1–152 to 178. See Fig. 100
G 7752 X	1 model. See Fig. 100

iv. *Dynasty VI*

G 7101 A	4 models: 24–12–117 to 120. See Fig. 100

Reisner listed seventeen more examples from the debris of the streets in the Eastern Field (29–12–261, 24–11–600, 601, 24–11–403, 405, 24–11–306, 24–12–762, 24–12–816, 24–11–410, 24–12–819, 24–12–594 to 597). Several of these are drawn on Fig. 100. There were many more models from the debris of both cemeteries, too numerous to list here. A number of degenerate forms listed above were originally given various subdivision types under B–XLIX, and will be found so listed in *Vol. I*. This type has now been omitted and all the degenerate examples grouped under B–LV, LVI, or LVII. Sometimes it has been hard to decide whether a model actually represents the collar shape. Consequently the grouping tends to be somewhat arbitrary. This is particularly evident in the wide-mouthed variations, several of which almost look as though they were models of bowls on stands. They are so badly made, however, that it is impossible to be very precise in this classification. It has seemed more simple to cut down the number of types as much as possible by including them here.

GROUP B: TYPE LVI. COLLAR JAR WITH FLAT BASE

The jar with collar (molding around neck) is one of the characteristic forms in both Upper and Lower Egypt in the Old Kingdom. It seems to have originated in a metal form but occurs in both stone and pottery. In Upper Egypt the most common examples were small, finely finished alabaster jars which had probably been used for ointments or other cosmetics. All forms of small size, of both stone and pottery, were probably functionally the same. There were no pottery examples of this type in the Hetep-heres tomb, but the large alabaster jar there of this shape seems also to have been an oil or ointment jar. The stone models (Stone Type XVI) were mostly dummy jars. The pottery models were hollowed out as if for use. A few large models of pottery occurred and a number of very small models, but only one practical vessel. As in the case of Type B–LV, a few of the degenerate models were listed in Vol. I as Type B–XLIX which has now been omitted, and these are listed here under B–LVI. The form occurred with a pointed base and these examples have been listed above under Type A–LVI. Since there is really only one large practical vessel from G 4631 B and only a few large models like that illustrated in Fig. 101 from G 4440 A, the type has not been subdivided. The smaller models show a more splayed foot.

Type B–LVI: All BrW unless otherwise stated

i. *Cheops to mid-Chephren*

G 4240 A	1 model (RBrW): 13–11–83; *Vol. I*, fig. 282. See Fig. 101
G 4440 A	4 models (3 RBrW, 1 RW): 13–11–102, 105, 124; *Vol. I*, fig. 287. See Fig. 101
G 4560 A	1 model: Junker, *Giza*, I, fig. 15, no. 4
G 4540 A	3 models (RBrW): 13–12–17, 22 a; *Vol. I*, fig. 289. See Fig. 101
G 4640 A	6 models (RBrW): 13–12–13, 24 a, 25 b; *Vol. I*, fig. 291. See Fig. 101 (3 degenerate examples)

ii. *Chephren to Neferirkara*

G 4860 N	1 model: Junker, *Giza*, I, fig. 60, no. 4
G 4520 A	3 models: 14–4–16; *Vol. I*, fig. 310. See Fig. 101
G 4430 A	frags.: 13–12–2; *Vol. I*, p. 487
G 4630 A	1 degenerate model: 14–1–21; *Vol. I*, fig. 299. See Fig. 101
G 4631 B	1 practical example (RW): 14–1–47; *Vol. I*, fig. 304c. See Fig. 101
G 4720 A	5 models: 14–3–37, 38, 41; *Vol. I*, fig. 314. See Fig. 101
G 4510 A	2 models (1 degenerate): 14–12–41, 42; *Vol. I*, fig. 321. See Fig. 101
G 2170 A	frag.: 32–12–15 a; *Vol. I*, p. 450
G 4930 B	2 models: 15–1–21
G 4220 A	2 models: 14–4–36. See Fig. 101
G 1457 A	3 models (RW): 34–12–21 b, c
G 7560 B	1 model (RW): 36–12–36. See Fig. 101

iii. *End of Neferirkara to end of Dynasty V*

G 4733 E	1 degenerate model (RW): 14–2–123. See Fig. 101
G 1011 P	4 models (1 degenerate) (RW): 13–1–503. See Fig. 101
G 2184 G	8 models (RW): 35–9–64 c
G 2196 D	23 models (RW): 34–10–18 c
G 1370 A	12 models (10 degenerate) (RW): 35–2–30 to 32. See Fig. 101
G 2416 D–III	7 models: 36–7–29. See Fig. 101
G 2409	1 model: 13–1–509. See Pl. 50b 1/1
G 6050 debris	1 model: 25–11–145. See Fig. 101
G 7140 X	1 model: 37–1–3
Street debris, Cem. 7000	10 models: 24–11–404, 24–12–598, 814, 815, 817, 818, 25–12–57, 28–4–107 b, c (9 degenerate). See Fig. 101

GROUP B: TYPE LVII. CYLINDRICAL JAR, IMITATION OF STONE FORM

The cylindrical jar was one of the types of stone vessels used for ointments from Dynasty I to Dynasty IV. Only five models in pottery can be listed from Giza and therefore must represent imitations of stone vessels. As a pottery form this type has no importance for the development of the pottery of the Old Kingdom.

Type B–LVII

i. *Cheops to mid-Chephren*

G 4560 A	1 model: Junker, *Giza*, I, fig. 15, no. 3

iii. *Neferirkara to end of Dynasty V*

G 4811 B	1 model (FRW): 35–11–71
G 7752 X	1 model (BrW): 29–12–265
G 7923 A	1 model (RW): 30–12–3. See Fig. 102
G 7710 B	1 model: 25–2–1153. See Fig. 102

GROUP B: TYPE LVIII. BARREL JAR WITH CORD NET, IMITATION OF STONE MODELS OF TYPE V

The barrel jar with cord net around the middle appears in a number of well-made models of alabaster and pottery. The origin of this form has been given under the stone form (Stone V–extra) as a large wine jar strengthened by a cord net around the middle. Examples of large stone jars with a cord net in relief have been recovered from Dynasties II–III.

The examples found at Giza were of the well-levigated red brown ware and well smoothed. No large vessel was found, none being over 13 cm. high. The ordinary range is from 6 to 10 cm. in height. They could actually have been used for ointment jars and need not necessarily have been models. The smaller examples have the splayed foot, and a few badly made pieces are difficult to distinguish from the degenerate collar-jar models. There seems no purpose in making the splay-foot examples into a subtype as has been done with the neckless shoulder jar of Type LV, although they are so listed in *Vol. I*.

Type B–LVIII

i. *Cheops to mid-Chephren*

G 1201 A	2 examples: *Vol. I*, fig. 218, nos. 15, 16
G 4560 A	1 example: Junker, *Giza*, I, fig. 15, no. 7
G 4240 A	2 or more examples: 13–11–81; *Vol. I*, fig. 282. See Fig. 103
G 4340 A	3 examples: 13–10–21, 22, 44; *Vol. I*, fig. 285
G 4440 A	1 example: 13–11–123 n; *Vol. I*, p. 478
G 4540 A	2 examples: 13–12–16 b, 22 b; *Vol. I*, fig. 289
G 4640 A	2 examples: 13–12–12; *Vol. I*, fig. 291. See Fig. 103.

ii. *Chephren to Neferirkara*

G 4430 A	frags.: 13–12–2; *Vol. I*, p. 487
G 4520 A	1 example: 14–4–17; *Vol. I*, fig. 310. See Fig. 103
G 4720 A	2 examples: 14–3–40; *Vol. I*, fig. 314
G 4220 A	3 examples: 14–4–37. See Fig. 103

iii. *End of Neferirkara to end of Dynasty V*

G 6034 R	1 example: 25–12–144. See Fig. 103
G 7752 X	1 example: 29–12–265. See Fig. 103

GROUP B: TYPE LIX. JAR WITH HIGH NECK

Several jars with peculiar shape must be included here. Reisner has remarked that, in all probability, two of them were made to suit the arbitrary taste of some potter or his patron. These were the two vessels with a vertical spout from G 4520 and 4530. A somewhat similar jar with high neck and flaring mouth has no spout. The other two jars are shoulder jars with a wider base and resemble the jars of Type B–XVIII found by Junker (Fig. 92) except that they have too high a neck to be classed with these jars. As can be seen clearly in Pl. 55 a, they are of red polished ware.

Type B: LIX a: High-necked jar with narrow base and vertical spout

ii. *Chephren to Neferirkara*

G 4530 A	1 example (RBrW, red wash): 14–1–78; *Vol. I*, fig. 297 a. See Fig. 104
G 4520 A	1 example (RBrW, red wash): 14–4–13; *Vol. I*, fig. 310. See Fig. 104

These two examples were found in mastabas adjoining each other in Cem. 4000. We have seen in Chapter VI that the burial of G 4520 A contained a seal impression with the name of Weserkaf, the first king of Dynasty V.

Type B–LIX b: High-necked jar with narrow base and no spout

iii. *End of Neferirkara to end of Dynasty V*

G 4813 C	3 examples (2 fragmentary, RBrW): 15–11–78. See Fig. 104; Pl. 50 d, 2/1, 3

Type B–LIX c: Shoulder jar with high neck

iii. *End of Neferirkara to end of Dynasty V*

G 2440 A	2 examples (RP): 40–4–8, 11. See Fig. 104 and Pl. 55 a

GROUP C: ROUND-BOTTOMED BOWLS AND BASINS

The bowls and basins include (1) large tubs and basins used in beer brewing or as temporary containers of liquids (water, beer, and so on), (2) large bowls or small basins with a tubular spout or open spout, obviously adapted to the pouring of liquids, and (3) a number of bowls of various forms used as containers of liquids and food. These vessels appear in two great groups, one with rounded bottom and the other with a flat base, but both apparently functionally the same. The stability of the vessel depends largely on the form of the base, although a number of round-bottomed forms are relatively stable. As was usual in all vessels, stability was increased by the use of a tubular bowl stand. In fact, one form of vessel consisted of a round-bottomed bowl on a bowl stand, made of one lump of clay (E–XXI).

Aside from the form of the bottom, the bowls and basins present variations marked by the rim around the mouth and the depth of the body. The body may be either shallow or deep. The rim may be (1) plain without molding, (2) drawn out laterally with a molded edge, (3) with molded edge around a contracted or slightly contracted mouth, (4) with an internal rim (stone form), or (5) a recurved rim (curving inwards from the top of the body and then outwards to a plain rim). Almost all these variations of body and rim occur in both the round-bottomed and flat-bottomed basins and bowls. Although the form of the base does not represent an essential functional difference between the two groups of vessels, it seems advisable to separate them into Groups C and D, in order to facilitate the identification of the individual vessels.

GROUP C: TYPE XXVII. SHALLOW ROUND-BOTTOMED DISH OR BOWL WITH EXTERNAL RIM

The dish of Type C–XXVII was well represented in the Mycerinus Valley Temple but occurred infrequently in the mastabas of the Western Field. The type was not recovered at all in the Eastern Cemetery.

Type C–XXVII

i. *Cheops to mid-Chephren*

G 5020 Ann. (intrusive)	2 examples (RW): 38–8–22 b, 23; *Vol. I*, fig. 283. See Fig. 105

iii. *End of Neferirkara to end of Dynasty V*

G 4341 A	1 example (BrW): 14–1–101
G 4220 A	4 examples (BrW and RP): 14–4–43 to 45. See Fig. 105
G 4734	1 example (BrW): 14–2–127
G 1110 D	1 example (RW): see Fig. 105
G 6013 A	3 examples (RW, RP, RBrW): 25–11–118 to 120. See Fig. 105

iv. *Dynasty VI*

G 5342 A	1 example (RW): 14–12–3. See Fig. 105
G 2357 N	1 example (RP): 36–4–14. See Fig. 105
G 2381 A	1 example (RP): 12–12–555. See Fig. 105; Pl. 54 d, 1/1
G 5223	frags. (RP): 14–12–80 b

GROUP C: TYPE XXIX. BASIN WITH ROLL RIM

Type C–XXIX was represented in the Mycerinus Valley Temple by one characteristic large basin (*Mycerinus*, fig. 73, no. 1) similar to the beer basins but without spout and with a round bottom. One rough example was preserved from the mastabas (14–12–43). It had a conical body and bulging sides and may well have been a badly made example of the basin with recurved rim or a bent-sided form. Four other examples seem to belong to this type.

Type C–XXIX

ii. *Chephren to Neferirkara*

G 5210	2 examples (BrW): 14–12–43, 44. See Pl. 50 d, 1/3, 2/2

iii. *End of Neferirkara to end of Dynasty V*

G 4822 B	1 example (RW): 14–2–27. See Fig. 106
G 2423 V	1 example (RP): 36–11–40. See Fig. 106

iv. *Dynasty VI*

G 2004 A	1 example (RP): 36–3–7. See Fig. 106

GROUP C: TYPE XXX. BENT-SIDED BOWLS AND BASINS

The bent-sided bowl or basin is the most frequent type found in the burial chambers of Dynasties V and VI. The majority of the examples have round bottoms, but a small number have flat bottoms (Type D–LXXVI). Some of the examples have a roll rim around the mouth and others have plain rims. A distinct angle is formed, both on the inside and on the outside, where the upper part joins the lower part of the vessel. There is considerable variation between deep and shallow forms, depending on the height at which this angle falls. Those vessels with a roll rim have been marked with the Subtype a, and those without roll rim, Subtype b. The bent side and recurved rim seem to be two different ideas for preventing the spilling of the liquid for which these bowls and basins were certainly intended. Subtype c is represented by two examples where the mouth turns in slightly. Subtype d consists of examples with lipped spout.

Type C–XXX a: Roll rim

ii. *Chephren to Neferirkara*

G 1223 Annex X (probably intrusive from Annex A)	7 examples (RW or RP): 34–10–6 to 10, 19, 20; *Vol. I*, fig. 227 b. See Fig. 107
G 5080 C (equals G 2200 C)	1 example (RP): 33–1–59. See Pl. 54 a, 4/1

iii. *End of Neferirkara to end of Dynasty V*

G 4733 E	2 examples (RP): 14–2–107. See Fig. 107
G 6020 A	1 example (RP): 25–12–83. See Fig. 107
G 6052 B	15 examples: 25–12–675 to 679, 681, 683, 688, 690, 696 to 701. See Fig. 107
G 6028 E	1 example (RP): 25–12–677
G 6013 A	1 example (RW): 25–11–121
G 4811 B	2 examples (BrW): 15–12–22. See Fig. 107
G 4822	5 examples: 14–2–32. See Fig. 107
G 4741 B	2 examples: 38–7–6 a, b
G 2009	1 example (RP): 36–4–27
G 7530 Y	1 example (RW): 28–6–10. See Fig. 107
G 7112 A	1 example (RBrW): 25–1–311. See Fig. 107

iv. *Dynasty VI*

G 2415 U	1 example (RP): 13–1–512. See Fig. 107
G 2381 A	9 examples (RP): 12–12–556 to 564. See Fig. 107; Pl. 54 b, d, 1/2. 2/1–2
G 2379 A	11 examples (RP)
G 2422 A	6 examples (RP)
G 2423 V	1 example (RP): 36–11–34
G 2230 C	2 examples (RP): 29–3–28, 29
G 2037 b X	1 example: 37–11–13
G 7102 Pit	1 example: 25–1–648. See Fig. 107

Type C–XXX b: Plain mouth

i. *Cheops to mid-Chephren*

G 4240 A	1 example (RP): 13–11–67; *Vol. I*, fig. 282. See Fig. 108
G 4750 A	1 example (RW): Junker, *Giza*, I, fig. 12, no. 23
G 5020 Annex (intrusive)	1 example: 35–8–24; *Vol. I*, fig. 283
G 7330 A	4 examples (RP): 36–6–17. See Fig. 79

ii. *Chephren to Neferirkara*

G 5080 C (G 2200 C)	3 examples (RP): 33–1–59 c. See Fig. 108; Pl. 54 a, 1/1–3
G 5230 A	1 example (BrW): 33–1–78
G 4341 A	2 examples (RP): 14–1–93, 104 h. See Fig. 108
G 4940 B	1 example (RP): 15–1–14

iii. *End of Neferirkara to end of Dynasty V*

G 6010 A	1 example (RW): 25–11–66
G 6013 A	1 example (RW): 25–11–122
G 1110 A	2 examples. See Fig. 108
G 4822 B	4 examples (RP and RW): 14–2–23, 29, 30, 34. See Fig. 108
G 4833 B	frags. (RP): 14–2–8
G 4818 C	1 example (RW): 15–12–6
G 2330 A (G 5380 A)	1 example (RP): 12–10–51
G 2013 D	1 example (RP): 37–7–51
G 4741 B	1 example: 38–7–3

iv. *Dynasty VI*

G 5562 A	1 example (RP): 33–2–126
G 2379 A	2 examples (RP)
G 4832 A	1 example (RP): 38–7–15
G 2423 V	1 example (RP): 36–11–33

Type C–XXX c: Contracting mouth

iii. *End of Neferirkara to end of Dynasty V*

G 6010 A	1 example (RP): 25–11–69. See Fig. 108

iv. *Dynasty VI*

G 2422 A	1 example (RP) with two molded bands around contracted mouth

Type C–XXX d: Lip spout

ii. *Chephren to Neferirkara*

G 1223 Annex X (intrusive from Annex A)	4 examples (RP, DbW): 34–10–1, 3 to 5; *Vol. I*, fig. 227 b

iii. *End of Neferirkara to end of Dynasty V*

G 6052 B	7 examples (RP): 25–12–687, 692 to 695, 702, 703. See Fig. 109
G 7530 Y	1 example (RP): 28–6–9. See Fig. 109

GROUP C: TYPE XXXII. ROUND-BOTTOMED BASINS AND BOWLS WITH RECURVED RIM

The examples from the mastabas have a more pronounced form of the recurved rim than is to be found in the Mycerinus Types XXXI, XXXII, and XXXIII. It seems, therefore, better not to attempt to establish a correspondence with the Mycerinus types as was done in *Vol. I*, where a number of subtypes are also used. In the following text all examples of round-bottomed vessels with recurved rim are listed under Type C-XXXII, since they seem to be a development of this Mycerinus type. The variations in height of rim and the sometimes rudimentary nature of the rims of certain vessels appear clearly in the drawings and do not seem to justify the use of subtypes.

Type C–XXXII

i. *Cheops to mid-Chephren*

G 1203 A	2 frags.; *Vol. I*, fig. 220
G 1209 A	frag.; *Vol. I*, p. 397; fig. 224
G 4140 A	1 example: 13–11–63 b; *Vol. I*, p. 463
G 4240 A	2 examples (RP): 13–11–69, 76; *Vol. I*, fig. 282. See Fig. 110
G 5020 Annex (intrusive)	6 or more examples (RP): 35–8–16 to 22; *Vol. I*, fig. 283
G 7330 A	3 examples (RP): 34–6–17. See Fig. 79; Pl. 54 e, 1/1, 3

ii. *Chephren to Neferirkara*

G 1223 Annex X (intrusive from Annex A)	9 examples (RP): 34–10–2, 11 to 18; *Vol. I*, fig. 227 b. See Fig. 110
G 2210 A	2 examples (RP): 32–10–1, 2; *Vol. I*, p. 435
G 4430 A	frags.: 13–12–2; *Vol. I*, p. 487
G 4630 A	8 examples (RP): 14–1–1 to 6, 16; *Vol. I*, fig. 299. See Fig. 110
G 4831 B	2 examples (RP): 34–11–10
G 4720 A	4 or more examples (WSR): 14–3–42 to 44, 54; *Vol. I*, p. 510, fig. 314. See Fig. 110
G 4510 A	frags. (RP): 15–12–45 b; *Vol. I*, p. 519
G 4710 A	1 example: 14–3–6; *Vol. I*, p. 524
G 4341 A, B	4 examples (RP): 14–1–97, 104 a, 34–8–1, 2. See Fig. 110
G 5080 C (equals G 2200)	10 examples (9 RP and 1 WSR): 33–1–59 c. See Fig. 110; Pl. 54 a
G 5190 A (equals G 2300)	2 examples (RP): 12–10–13, 18.
G 5230 A	2 examples (BrW): 33–1–79, 80. See Figs. 110, 111
G 1454–55 A	1 example (RP): 34–12–22. See Fig. 110
G 1457 A	1 example (RP): 34–11–10
G 7560 B	1 example (RP): 36–12–10. See Pl. 50 c, 1/5

iii. *End of Neferirkara to end of Dynasty V*

G 4715 B	2 examples (RP): 15–12–17, 18. See Fig. 110
G 4734 A	frags. (WSR): 14–2–124
G 4741 B	1 example: 38–7–4
G 4822 B	4 examples (RP): 14–2–26, 28, 31, 22. See Fig. 111
G 4833 B	frags. (RP): 14–2–6, 7
G 4911	frags. of 5 or more (RP): 15–11–82
G 6010 A	6 examples (RP): 25–11–64 to 68, 101, 105
G 6013 A	3 examples (RP, RW, RBrW): 25–11–118 to 120
G 6028 E	1 example (RP): 25–12–224. See Fig. 110
G 6030 A	2 examples (RP): 25–11–56, 25–12–3
G 6040 D	1 example (RP): 25–12–55. See Fig. 110
G 6051 A	1 example (RP): 25–12–139
G 6052 B	9 examples (7 with molding around rim) (RP): 25–12–684, 680, 685. See Fig. 111
G 2018 a C	1 example (RP): 37–10–9
G 2037 b X	1 example (RP): 37–11–12
G 2330 A (equals G 5380)	1 example (RP): 12–10–50
G 2333 A	1 example (RP): 13–1–514. See Pl. 50 b, 2/2
G 2335 A	1 example (RP): 13–1–513. See Pl. 50 b, 2/1
G 2352 A	1 example (RW): 12–11–61
G 2360 A	2 examples (RW): 12–11–36, 37. See Fig. 110
G 2419 B	6 examples (RP): 36–5–12 to 17
G 5032 C	1 example (RP): 35–8–40
G 7510	1 example (RP): 29–4–8. See Fig. 111
G 7332 B	1 example (RW): 24–12–681. See Fig. 111
G 7492 A	2 examples (RW): 27–3–699, 1259. See Fig. 111
G 7789 A	1 example (RW): 28–4–187. See Fig. 111
G 7940 B	1 example (RW): 30–12–122. See Fig. 111
Street debris, Cem. 7000	3 examples (RW, RP): 24–12–820, 25–12–294, 29–11–290

iv. *Dynasty VI*

G 2072 B	2 examples (RP): 39–3–11, 12
G 2094 A	2 examples (RP): 36–9–2, 3
G 2099 B	1 example (RP): 39–1–20
G 2230 C	6 examples (RP): 39–3–22 to 27
G 2337 V	1 example (RP): 35–10–4
G 2352 Z	1 example (RP): 12–11–62
G 2357 N	4 examples (RP)

G 2385 X	2 examples (RP): 25–12–45, 46. See Fig. 110
G 2402 b A	1 example (RW): 36–4–50
G 2422 A	11 examples (RP and RBrW)
G 2419 B	11 examples (RP)
G 5223	7 or more examples (4 from pit V) (RP): 14–12–73 a, 36–11–35 to 38
G 5562 A	12 examples (RP): 33–2–117 to 119, 127 to 133. See Fig. 110

GROUP C: TYPE LXI. ROUND-BOTTOMED PANS AND BOWLS WITH PLAIN RIM

The round-bottomed bowls with plain rim were fully represented in all their subtypes in the Hetep-heres tomb, including the remarkable new type, a large bowl with two ledge handles and a bent lip spout. Most of the subtypes have been recorded in the early mastabas, including a single example of the ledge handle with spout. The number of examples appears to be few, perhaps due to accidents of preservation.

Type C–LXI a: Shallow wide pans

ii. *Chephren to Neferirkara*

G 4530 A	4 examples (BrW): 14–1–79, 80; *Vol. I*, fig. 297 a. See Fig. 112
G 4341 A	2 examples (1 fragmentary) (RBrW): 14–1–101, 104 d. See Fig. 112

Type C–LXI b: Wide shallow pan with rising sides

i. *Cheops to mid-Chephren*

G 4440 A	2 examples (RBrW): 13–11–122; *Vol. I*, fig. 287. See Fig. 112

iii. *End of Neferirkara to end of Dynasty V*

G 2018 a C	1 example (RP): 37–10–8

Type C–LXI c: Wide bowls

i. *Cheops to mid-Chephren*

G 4440 A	1 example (RP): 13–11–110; *Vol. I*, p. 478
G 4740 A	1 example (RBrW): 13–12–32 a; *Vol. I*, fig. 293. See Fig. 112

iii. *End of Neferirkara to end of Dynasty V*

G 4813 C	1 example (NrW); 15–11–72
G 7131	1 example (RP): 24–11–506. See Fig. 112

iv. *Dynasty VI*

G 7102 A	2 examples (RP): 25–1–649. See Fig. 112

Type C–LXI d: With two ledge handles and lip spout

i. *Cheops to mid-Chephren*

G 4340 A	1 example (RBrW): 13–10–28; *Vol. I*, fig. 285. See Fig. 112

Type C–LXI e: Deep bowl with flaring sides (conical)

i. *Cheops to mid-Chephren*

G 4340 A	2 examples (RBrW): 13–10–33, 55; *Vol. I*, fig. 285. See Fig. 112

ii. *Chephren to Neferirkara*

G 4710 A	1 example (RBrW): 14–3–7

Type C–LXI f: Deep bowl with nearly vertical sides

i. *Cheops to mid-Chephren*

G 4240 A	1 example (RP): 13–11–68; *Vol. I*, fig. 282
G 4340 A	2 examples (RBrW): 13–10–45, 46; *Vol. I*, fig. 285. See Fig. 112
G 4440 A	2 examples (RP): 13–11–123 d; *Vol. I*, p. 478

GROUP C: TYPE LXII. ROUND-BOTTOMED BOWLS WITH CONTRACTED OR SLIGHTLY CONTRACTED MOUTH

This type does not occur in the Hetep-heres tomb and has been found in only three examples at Giza.

Type C–LXII

i. *Cheops to mid-Chephren*

G 4240 A	2 examples (RBrW): 13–11–74, 75; *Vol. I*, fig. 282. See Fig. 113
G 4640 A	1 example (RP): 13–12–24 d (frags.); *Vol. I*, p. 483

GROUP C: TYPE LXIII. ROUND-BOTTOMED BOWLS WITH MOLDED RIM

This type does not appear in the Hetep-heres tomb or in the early mastabas.

ii. *Chephren to Neferirkara*

G 4341	1 example (BrW): 14–1–101

iv. *Dynasty VI*

G 2339 D	1 example (RW): 35–9–52
G 2419 B	3 examples (RW): 36–5–9, 10, 11. See Fig. 114
G 2422 A	1 example (RP)
G 2423 V	1 example (RP inside, rough outside): 36–11–39
G 2347 X (equals G 5562 A)	2 examples (RP): 33–2–139, 140
G 2357 N (equals G 5555)	4 examples (RP): 36–4–12, 13, 15, 16. See Fig. 114
G 7101 I	7 examples (RBrW) (3 with additional molding): 24–12–183. See Fig. 114

GROUP C. TYPE LXV: FLARING BOWL WITH MOLDED RIDGE INSIDE RIM

The form of the flaring bowl with a molding inside on the upper surface of the rim seems to be related to the stone bowl with cup hollow and was perhaps derived from that form. The pottery examples usually have a flat base, but a few examples appear to have a round bottom.

Type C–LXV

i. *Cheops to mid-Chephren*

G 1225 A	1 example (RP); *Vol. I*, fig. 231, no. 5

iii. *End of Neferirkara to end of Dynasty V*

G 5032 C	5 examples (RW): 38–4–43 to 47. See Fig. 115
G 4818 C	2 examples (BrW): 15–12–5, 8. See Fig. 115

GROUP C: TYPE LXVI. ROUND-BOTTOMED BOWL WITH ROLL RIM

The bowls and basins occur chiefly in Dynasty VI in two subtypes: (a) with tubular spout, and (b) without spout.

Type C–LXVI a: Tubular spout

iii. *End of Neferirkara to end of Dynasty V*

G 4741 B	1 example, fragmentary: 38–7–5

iv. *Dynasty VI*

G 2422 A	1 example (RP): 36–6–42. See Fig. 116

Type C–LXVI b: Without spout

G 5562 A (G 2347 X)	5 examples (RP): 33–2–120, 134 to 137. See Fig. 116
G 5555 (G 2357 N)	7 examples (RP and RW): 36–4–17 to 23. See Fig. 116
G 2419 B	1 example (RP): 36–5–18. See Fig. 116
G 7101 A, I	4 examples (RW, RBrW): 24–12–273, 270, 85, 179. See Fig. 116
G 2379 A	2 examples (RW, RP)

GROUP D: BASINS AND BOWLS WITH FLAT BOTTOM

GROUP D: TYPE XXXV. LARGE AND MEDIUM BASINS WITH ROLL RIM AND SPOUT

The large basin with flat bottom and roll rim which occurred in three examples in the Mycerinus Valley Temple (D–XXXIV; *Mycerinus*, fig. 75) was not found in the Hetep-heres tomb or in the Giza mastabas and has therefore been omitted from the type forms here. However, the similar basin with short tubular spout (D–XXXV, *Mycerinus*, fig. 76) was found in a number of examples in the Hetep-heres tomb and in both the Eastern and Western Fields. These differed a little from the Mycerinus forms, usually in having a broader base. Other examples had a half-open spout joining at the shoulder of the vessel, or opening through the roll rim. The occurrence of these three different kinds of spout has been indicated by three subtypes in the following list.

Type D–XXXV a: Short tubular spout

i. *Cheops to mid-Chephren*

G 1209 A	1 fragmentary example (RP); *Vol. I*, fig. 224, no. 4
G 1225 A	1 example (RW); *Vol. I*, fig. 231, no. 6. See Fig. 117
G 2120 A	1 fragmentary example (RW): 33–1–21; *Vol. I*, fig. 245
G 4240 A	1 example (RBrW): 13–11–92; *Vol. I*, fig. 282. See Fig. 117
G 5020 Annex (intrusive)	1 example, spout not preserved: 35–8–7; *Vol. I*, fig. 283. See Pl. 55 d
G 7330 A	2 examples (RP): 34–6–17 i, k. See Figs. 79, 117; Pl. 54 e, 2/1–2

Junker, in *Giza*, I, fig. 12, illustrates a number of fragments with spout from his early mastabas, but it is not quite clear, as in the case of his recurved rim fragments, to which type of vessel these belonged, since the base is in no case preserved.

ii. *Chephren to Neferirkara*

G 4630 A	1 example (RW): 14–1–9; *Vol. I*, fig. 299. See Fig. 117
G 4720 A	2 incomplete examples (RP) and frag. of 1 small basin (RW): 14–3–48, 55; *Vol. I*, p. 511, fig. 314
G 4510 A	2 examples (frags.) (RP): 15–12–45 a; *Vol. I*, p. 519
G 5080 C (G 2200)	1 incomplete vessel, spout missing; 1 frag. with spout: 33–1–59. See Pl. 55 b
G 7560 B	1 example (RP) incomplete: 36–12–12. See Fig. 117; Pl. 50 c, 2/4

iii. *End of Neferirkara to end of Dynasty V*

G 6052 B	1 example (RP): 25–12–674
G 6031 D	frags. with spout (RP): 25–12–133. See Fig. 117
G 7530 Y	1 low example (like D–XXXVI) with roll rim (RP): 28–6–7. See Fig. 117

iv. *Dynasty VI*

G 2381 A	2 examples (RP): 12–12–567, 568 (MFA no. 13.3270). See Pl. 54 d, 3/1–2
G 2379 A	2 examples (RW): See Fig. 117

Type D–XXXV b: Half-open spout opening from shoulder

i. *Cheops to mid-Chephren*

G 4140 A	1 frag. (RP): 13–11–30 b; *Vol. I*, fig. 279
G 4240 A	1 incomplete (RP): 13–11–72; *Vol. I*, fig. 282. See Fig. 118
Cem. 4000	frag.; Junker, *Giza*, I, fig. 12, no. 1

Type D–XXXV c: Open spout opening in roll rim

ii. *Chephren to Neferirkara*

G 4720 A	1 model (RBrW): 14–3–33; *Vol. I*, fig. 314. See Fig. 118

G 4520 A	1 model (BrW): 14–4–18; *Vol. I*, fig. 310. See Fig. 118
G 5080 C (G 2200 C)	3 examples (RP): 33–1–59 (one with spout missing). See Pl. 54 c, 1/1–2, 2/1

iii. *End of Neferirkara to end of Dynasty V*

G 4822 B	1 example (RP): 12–2–20. See Fig. 118
G 2416 D–III	1 model (BrW): 36–7–31. See Fig. 118

GROUP D: TYPE XXXVI. FLAT-BOTTOMED BOWLS AND BASINS WITH RECURVED RIM AND LONG TUBULAR SPOUT

The flat-bottomed bowls with well-formed recurved rim appear, as far as can be proved, to have had a tubular spout (longer than that of Type D–XXXV). Numerous fragments of recurved rims were found which may or may not have had a spout, but every complete example had a spout. The bowls in the Hetep-heres tomb of Type D–XXXVI all had the characteristic long tubular spout. Isolated spouts were also found with fragments of recurved rims. Reisner, therefore, groups all examples of fragments with well-marked recurved rim in Type D–XXXVI, unless the curvature indicated a rounded base. Only the best-preserved examples are listed below, although more are given in *Vol. I* and illustrated by Junker in fig. 12 of *Giza*, I. It was apparently only after Dynasty IV that a certain number of bowls occurred with rudimentary recurved rims or other modifications of the recurved rim. One incomplete example with half-open spout has been listed with the others and not placed under a subtype. One example (Pl. 50 d, 1/4) it has not been possible to identify.

Type D–XXXVI

i. *Cheops to mid-Chephren*

G 1203 A	1 fragment with long, half-open spout (RBrW): *Vol. I*, fig. 220, no. 2
G 4140 A	1 example (RP): 13–11–29; *Vol. I*, fig. 279. See Fig. 119
G 4240 A	1 example (RP): 13–11–71; *Vol. I*, fig. 282. See Fig. 119
G 4440 A	1 frag. with spout (RP): 13–11–123 g; *Vol. I*, p. 478
G 4540 A	frags. with spout (RP): 13–12–30; *Vol. I*, p. 481
G 4640 A	frags. with spout (RP): 13–12–24 e; *Vol. I*, p. 483
G 4340 A	2 examples (RP): 13–10–30, 31; *Vol. I*, fig. 285. See Fig. 119
G 7330 A	1 example (RP): 34–6–17 a. See Fig. 79; Pl. 54 e, 1/2

ii. *Chephren to Neferirkara*

G 4720 A	1 example, incomplete (RP): 14–3–47; *Vol. I*, fig. 314. See Fig. 119
G 4940 A	frags. with spout (perhaps intrusive) (RP): 15–1–12

GROUP D: TYPE XXXVII. FLAT-BOTTOMED BASINS AND BOWLS WITH MOLDING UNDER ROLL RIM OR PLAIN ROLL RIM

Reisner noted that there was another group which was closely related to the basins and bowls with recurved rim and long tubular spout. In *Mycerinus* two examples are illustrated (fig. 77, nos. 3, 4) where there might be some doubt as to whether they have a roll rim or a rudimentary recurved rim. One might raise the question, also, as to whether these should not be grouped with *Mycerinus*, fig. 75, as Type XXXIV, which has been omitted here, since no clear examples occurred at Giza. The possibility should be kept in mind, though, that two examples from G 5080 C and 5020 Annex (Pl. 55 b, d) had not preserved the spout and might be Type XXXIV rather than XXXV. The examples grouped here under XXXVII are low forms, however, and seem to belong with the vessels with molding under the roll rim. These are generally small and late in date. Reisner foresaw the possibility that an example may be found with a recurved rim and without spout and suggested that these also be grouped here under XXXVII a, should they be found to occur. The examples with molding are given under Subtype b and those with roll rim under c.

Type D–XXXVII b: With molding under roll rim

iii. *End of Neferirkara to end of Dynasty V*

G 4822 B	2 examples (RP): 14–2–21, 24. See Fig. 120
G 4512 A	1 example (RW): 15–12–70. See Fig. 120, Pl. 50 d, 1/1

Type D–XXXVII c: With plain roll rim

iii. *End of Neferirkara to end of Dynasty V*

G 4512 A	1 example (RW): 15–12–73. See Fig. 120
G 7432 A	1 example (RW): 24–11–505

GROUP D: TYPE XXXIX. FLARING FLAT-BOTTOMED BOWLS

The flat-bottomed bowl with concave flaring sides presents several variations as seen in *Mycerinus*, fig. 78. Examples occur in the Old Kingdom all over Egypt (see *Naga-ed-Dêr*, III, fig. 44, nos. 11–13) but being of RP are not common, although widely distributed. The type is clearly represented at Giza, although it does not occur frequently. Several examples with straight flaring sides were listed in *Vol. I* as Type LXXIII. This type has been eliminated here, where the vessels are listed as XXXIX b. The bowls with internal molding, which were called Type LXXV in *Vol. I*, are here included as Subtype XXXIX c.

Type D–XXXIX a: Projecting external rim

i. *Cheops to mid-Chephren*

G 4240 A	1 example (RP): 13–11–66; *Vol. I*, fig. 282
G 4340 A	2 or more examples (RP): 13–10–66; *Vol. I*, p. 474

ii. *Chephren to Neferirkara*

G 4720 A	2 examples, incomplete (RP): 14–3–49, 51; *Vol. I*, p. 511

G 4341 A	1 example, incomplete, and frags. (RP): 14–1–92, 104 c. See Fig. 121
G 7530 A	1 example, incomplete (RP): 27–6–12. See Fig. 121
G 7560 B	1 example (RP): 36–12–11. See Fig. 121, Pl. 50 c, 1/4
G 5080 C (equals G 2200)	1 example (RW): 33–1–58. See Pl. 54 c, 2/2

iii. *End of Neferirkara to end of Dynasty V*

G 4512 A	1 example (RW): 15–12–72
G 4911 A	1 example (RP), squat (straight sides): 15–11–84. See Fig. 121
G 7650 W	1 example (BrW): 29–4–125. See Fig. 121

iv. *Dynasty VI*

G 2132 C	1 example (RP): 36–2–4
G 5562 A (equals G 2347 X)	1 example, incomplete (RP): 33–2–116. See Fig. 121
G 2330 A	1 example (RP) with rudimentary recurved rim: 12–10–49. See Fig. 121, Pl. 50 b, 2/3
G 7102 (probably from B shaft)	1 example (RBrW): 25–1–744. See Fig. 121

Type D–XXXIX b: Plain rim

ii. *Chephren to Neferirkara*

G 4620 A	2 examples (RP), 1 with straight sides: 14–3–64, 66. See Fig. 121
G 5190 A (equals G 2300)	2 examples (RP): 12–10–16, 20
G 1457 A	1 example (RW), with straight sides, low: 34–11–4. See Fig. 121

iv. *Dynasty VI*

G 2409 G	1 example (RW): 36–5–4

Type D–XXXIX c: With molded ridge inside rim

This subtype has been called D–LXXV in *Vol. I* and is the flat-bottomed version of Type C–LXV.

i. *Cheops to mid-Chephren*

G 1203 A	1 example (BrW): *Vol. I*, fig. 220, no. 10

ii. *Chephren to Neferirkara*

G 4630 A	1 example (BrW): 14–1–7; *Vol. I*, fig. 299. See Fig. 121
G 4620 A	frags. (RBrW): 14–3–68 c; *Vol. I*, p. 509
G 4720 A	frags. of 3 examples (RW): 14–3–57 a, b, f; *Vol. I*, p. 511
G 4341 A	3 examples and several rim fragments (BrW, RP, RBrW): 14–1–98, 99, 100, 104. See Fig. 121
G 5130 A	1 incomplete example (RW): 15–10–1. See Fig. 121

iii. *End of Neferirkara to end of Dynasty V*

G 4734 A	frags. (RP and RBrW): 14–2–125, 126

Type D–XXXIX d: Fancy forms; lipped bowl and footed cup

ii. *Chephren to Neferirkara*

G 7560 B	straight-sided cup with foot (RW): 36–12–21. See Fig. 122, Pl. 50 c, 1/3. A possible second example may occur in Dynasty V in G 6030 B, where there were two fragments of straight-sided cups, apparently with a low base (25–11–92, 93). These are too uncertain to list separately. Possibly the fragment from G 2381 Z (12–12–163, Pl. 50 b, 1/3) might be the foot of such a bowl, but it is too uncertain to list as such

iv. *Dynasty VI*

G 2409 G	deep bowl with straight sides and rim folded back to form 5 lips (FrW); compare the stone example from G 1204, Stone Type X e (Pl. 45 a, b, Fig. 147). See Fig. 122

GROUP D: TYPE LXXI. LARGE TUB OF BROWN MUD WARE (ONE OF RW), WITH BAND RIM

The great tubs of brown surface mud ware were well represented in the Hetep-heres group with two variations: (a) with unpierced bottom, and (b) with strainer bottom. In the early mastabas examples of these tubs were found, but none had a strainer bottom. The first example listed below was of ordinary red brown ware with a red surface, although all the rest were of mud ware.

Type D–LXXI a: Great tub with unpierced bottom

i. *Cheops to mid-Chephren*

G 1209 A	1 example (RW): *Vol. I*, fig. 224, no. 2
G 1225 A	1 example: *Vol. I*, fig. 231. See Fig. 123
G 1203 A	1 example: *Vol. I*, p. 391
G 2120 A	2 examples: 33–1–18, 19; *Vol. I*, fig. 245. See Fig. 123
G 4140 A	frag. of rim: 13–11–51; *Vol. I*, p. 464
G 4240 A	fragments of several examples: 13–11–93; *Vol. I*, p. 468
G 4440 A	frags.: 13–11–123 c; *Vol. I*, fig. 287
G 4540 A	frags. of 2 examples: 13–12–16 g, 31; *Vol. I*, p. 481

Junker illustrates an example from G 4350 A in *Giza*, I, fig. 12, no. 28, and mentions on pp. 161, 168, 191, 202, 205, 207, 211, and 227, fragments from mastabas G 4000, 4160, 4260, 4360, 4560, 4350, 4450, 4650, and 4460, so that it is evident that these tubs were of frequent occurrence in the early mastabas at Giza.

ii. *Chephren to Neferirkara*

G 4860 N	1 example: Junker, *Giza*, I, fig. 60, no. 1, p. 247
G 7560 B	upper part of one example: 36–12–22. See Fig. 123; Pl. 50 c, 2/2

GROUP D: TYPE LXXII. FLAT-BOTTOMED BOWL WITH CONTRACTED MOUTH

The flat-bottomed bowl with contracted mouth was found at Naga-ed-Dêr (see *Naga-ed-Dêr*, III, fig. 35). Only one or two examples were found in the Hetep-heres tomb, and examples were rare in the mastabas.

Type D–LXXII a: Plain rim

iv. *Dynasty VI*

G 2357 D–I (equals G 5555)	1 example (drab ware): 35–11–47. See Fig. 124

Type D–LXXII b: Plain rim with spout

ii. *Chephren to Neferirkara*

G 2160 A	1 example (RP): 33–1–8. See Fig. 124

Type D–LXXII c: Internal rim (as stone form)

i. *Cheops to mid-Chephren*

G 4460 A	1 example (RP): Junker, *Giza*, I, fig. 12, no. 19
G 4240 A	1 example (RBrW): 13–11–73; *Vol. I*, fig. 282. See Fig. 124
G 4540 A	1 example (RBrW): 13–12–16 f; *Vol. I*, p. 481

GROUP D: TYPE LXXIV. FLAT-BOTTOMED PAN WITH CONCAVE SIDES AND FLARING PLAIN RIM

The flat-bottomed pan with concave sides and flaring plain rim was represented in the Hetep-heres group by three examples of RP. The type in this exact form did not occur in the mastabas, but there were examples which may be regarded as a degeneration of the type.

i. *Cheops to mid-Chephren*

G 4440 A	1 example (RBrW): 13–11–118; *Vol. I*, fig. 287. See Fig. 125

ii. *Chephren to Neferirkara*

G 4630 A	4 examples: 14–1–17 (RBrW, *Vol. I*, fig. 299), 14–1–25. See Fig. 125

iii. *End of Neferirkara to end of Dynasty V*

G 5032 C	2 examples (RW and RP): 35–8–41, 42. See Fig. 125

GROUP D: TYPE LXXVI. BENT-SIDED BOWLS WITH FLAT BOTTOM

One of the most frequent of the round-bottomed bowls was Type XXX with bent sides. These had either a roll rim or a plain rim. The flat-bottomed bent-sided bowls had only the plain rim, except for one example. Most of them were deep, but there was one shallow example.

Type D–LXXVI a: External rim with molding below

iii. *End of Neferirkara to end of Dynasty V*

G 6020 A	1 example (RW): 25–12–50. See Fig. 126

Type D–LXXVI b: Plain rim

ii. *Chephren to Neferirkara*

G 4720 A	2 examples (RP): 14–3–46, 52; *Vol. I*, fig. 314. See Fig. 126
G 4410 A	1 example (RP): 15–12–66; *Vol. I*, fig. 318
G 4220 A	1 example, incomplete (RP): 14–4–29
G 5190 A (equals G 2300)	1 example, incomplete (RP): 12–10–17
G 4930 B	1 example, incomplete (RP?): 15–1–18. See Fig. 126, Pl. 50 d. 1/2
G 7530 Y	1 example (RP): 28–6–6. See Fig. 126

iii. *End of Neferirkara to end of Dynasty V*

G 6040 B	1 incomplete example (RP): 25–12–267
G 6020 A	1 example (RP): 25–12–77
G 4733 A	1 incomplete example (RP): 14–2–105. See Fig. 126

GROUP D: TYPE LXXIX. MODELS OF BASINS AND BOWLS

The most common type of vessels found in the Western Field were the models of basins and bowls. In the Eastern Field the models, like the other vessels, were not numerous, but widely distributed. The examples have, in general, straight or nearly straight sides. Turned on the wheel, obviously hastily and cheaply, they sometimes present a splay foot and occasionally slightly concave sides. They do not represent a common type of large bowl as might be expected (unless they are models of XXXIX b), but seem rather to be a substitute for the stone bowls and stone models.

The form is subdivided into (a) low forms (saucers) and (b) high forms. Some examples have flaring sides and may doubtfully be regarded as models of Type D–XXXIX. The early examples are generally large and well formed, but in Dynasty V small models become common and are commonly found in the dumps of temporary offering vessels thrown out from the chapels. Below are listed the early examples and samples of the later models.

Type D–LXXIX a: Low forms

i. *Cheops to mid-Chephren*

G 4140 A	1 example (BrW): 13–11–41; *Vol. I*, fig. 279
G 4240 A	many examples of RW and RBrW: 13–11–77, 78; *Vol. I*, fig. 282
G 4340 A	1 example (RBrW): 13–10–23; *Vol. I*, fig. 285
G 4440 A	over 10 examples (RBrW): 13–11–1231: *Vol. I*, p. 479
G 4540 A	59 examples (RBrW and 1 RW): 13–12–18, 19, 21; *Vol. I*, fig. 289. See Fig. 127
G 4640 A	12 examples: 13–12–14. See Fig. 126
G 7120 A	1 example (RW): 24–12–574. See Fig. 127

G 7210 B	1 example (BrW): 24–12–1137. See Fig. 127
G 7220 A	1 example (RW): 24–12–824. See Fig. 127
G 7410 chapel	1 example (RW): 25–1–431. See Fig. 127
G 7330 A	1 example (RW): 34–6–17, Y. See Fig. 79

ii. *Chephren to Neferirkara*

G 4530 A	18 examples (RW): 14–1–71, 81; *Vol. I*, fig. 297 a. See Fig. 127
G 4630 A	5 examples (BrW): 14–1–24; *Vol. I*, fig. 299. See Fig. 127
G 4930 B	5 examples (RW): 15–1–22. See Fig. 127
G 4520 A	94 examples (BrW): 14–4–14; *Vol. I*, fig. 310
G 4720 A	38 examples: 14–3–50; *Vol. I*, fig. 314. See Fig. 127
G 4410 A	5 examples (RW): 15–12–64; *Vol. I*, fig. 318. See Fig. 127
G 4510 A	2 examples: 15–12–44; *Vol. I*, p. 519
G 4710 A	40 examples (BrW): 14–3–10, *Vol. I*, fig. 325
G 1457 A	over 50 examples (RW): 34–12–21 e. See Fig. 127
G 7560 B	1 example: 36–12–34
G 7510 chapel	1 example: 25–2–1234

iii. *End of Neferirkara to end of Dynasty V*

G 6030 B	over 8 examples (RW): 25–11–84 to 88, 91. See Fig. 127
G 6034 R	27 examples (RW): 25–12–50
G 7520 A	1 example (RW): 27–2–294
G 7766 A	2 examples (DbW): 29–12–314. Fig. 127
Street 7100	1 example (RW): 24–11–402. See Fig. 127
G 7112 A	over 118 examples: 25–1–190 to 318

iv. *Dynasty VI*

G 7101 A	10 examples (RW): 24–12–121 to 130

Type D–LXXIX b: High forms

i. *Cheops to mid-Chephren*

G 2120 A	1 example (BrW): 33–1–12; *Vol. I*, fig. 245. See Fig. 127
G 4550 A	11 examples; Junker, *Giza*, I, p. 213
G 4340 A	66 examples (RBrW): 13–10–53, 54. See Fig. 127
G 4640 A	25 examples (RBrW): 13–12–15, 24 b, 26; *Vol. I*, fig. 291

ii. *Chephren to Neferirkara*

G 4530 A	2 examples (RW): 14–1–72; *Vol. I*, fig. 297 a
G 4220 A	2 examples (BrW): 14–4–35
G 7510 chapel	2 examples (RW): 25–2–1235. See Fig. 127
G 7670 B	2 examples (RW): 31–1–499. See Fig. 127

iii. *End of Neferirkara to end of Dynasty V*

G 2370 A	1 example (BrW): 12–11–29. See Fig. 127
G 4733 E	4 examples (RP): 14–2–104. See Fig. 127
G 7232 B	1 example (RW): 24–12–839. See Fig. 127

GROUP E: BOWL-TABLES, BOWL-STANDS, AND JAR-STANDS

The bowl-table is a comparatively low form known in pottery and in stone from Dynasty O to the reign of Khasekhemuwy, when the stone form was replaced by the flat-topped table. The pottery bowl-table appears infrequently in the Hetep-heres tomb and in the early mastabas. It is probably only because of chances of preservation that the form is not recorded from Dynasty III. The bowl-stands with a separate bowl present functionally the same form. The lower cylinder and ring-stands were used for supporting bowls but also for supporting jars. All the high forms of these utensils were used in the periodic offering services in the chapels and temples but occur sometimes in burial chambers.

GROUP E: TYPE XXI. THE BOWL-TABLE

i. *Cheops to mid-Chephren*

G 2120 A	1 incomplete example (RW): 33–1–19; *Vol. I*, fig. 245
G 4450 A	frags.: Junker, *Giza*, I, fig. 12, nos. 22, 24, p. 208
G 4140 A	1 example (RBrW): 13–11–25; *Vol. I*, fig. 279
G 4240 A	1 example (RBrW): 13–11–80; *Vol. I*, fig. 282
G 4340 A	4 examples (RW): 13–10–51; *Vol. I*, fig. 285. See Fig. 128
G 4440 A	1 example, incomplete (RBrW): 13–11–123 k; *Vol. I*, p. 479

ii. *Chephren to Neferirkara*

G 4530 A	1 incomplete example (BrW): 14–1–73; *Vol. I*, fig. 297 a

iii. *End of Neferirkara to end of Dynasty V*

G 2007 D	1 example (RW): 36–3–48

GROUP E: TYPE XXII. TALL BOWL-STAND WITH OR WITHOUT TRIANGULAR PERFORATION

The tall bowl-stands were used in the chapels, and broken examples were found scattered over the whole Western Field. Several of the best preserved examples are listed below, and it will be noted that a few of these were found in burial chambers. Some have straight and others concave sides, but these have not been separated into Types XXII and XXIII as in *Mycerinus*, p. 220. Type XXIII is omitted here.

Type E–XXII a: Large examples

ii. *Chephren to Neferirkara*

G 1457 chapel	1 example with hieratic inscription (RP): 34–11–9. See Fig. 129

G 1407 chapel	1 example (RP): 34–12–3. See Fig. 129

iii. *End of Neferirkara to end of Dynasty V*

G 4422 B	1 complete and two fragmentary examples (RP): 38–6–48, 49, 51. See Fig. 129
G 2006 B	1 example (RP): 36–3–43. See Fig. 129; Pl. 55 e, 1/1
South of G 7670	incomplete example (RW): 37–5–3

iv. *Dynasty VI*

G 2132 C	1 example (RP): 36–2–15. See Fig. 129; Pl. 55 e, 1/2

Type E–XXII b: Small examples

The lower stands, which could have been used for bowls or jars, were found occasionally in the burial chambers, although again their ordinary use must have been in connection with the chapel services. Fragments of these were found mixed with the traditional offering jars thrown out from the chapels and used in the filling of later mastabas. However, in other cases, such as in G 4733 E, there was no doubt that several examples had been placed with the burial equipment.

iii. *End of Neferirkara to end of Dynasty V*

G 4733 E	15 fragmentary examples (WSR): 14–2–123. See Fig. 130
G 2007 D	5 examples (RP): 36–3–44 to 48. See Fig. 130; Pl. 55 e, 1/3–5, 2/3–4
G 5040 Y	1 example (RP): 35–8–57. See Fig. 130

GROUP E: TYPE XXIV. RING STANDS

i. *Cheops to mid-Chephren*

G 2120 A	1 example, incomplete (RW): 33–1–27; *Vol. I*, fig. 245. See Fig. 131
G 4340 A	8 examples (RBrW): 13–10–48, 49, 50; *Vol. I*, fig. 285. See Fig. 131

iii. *End of Neferirkara to end of Dynasty V*

G 4733 E	74 examples (WSR): 14–2–122. See Fig. 131

The heavy ring stand suited to use with large jars is common in Dynasty V and later into the Roman period.

GROUP F: CEREMONIAL VESSELS

Reisner has included in Group F the rough vessels called 'flower pots' as well as the offering trays of several forms.

GROUP F: TYPE XXV. BREAD POT ('FLOWER POT'): ROUGH TRADITIONAL POTS OF MUD WARE

One of the oldest vessels placed in the grave was the rough pan or pot of lightly baked mud ware, which seems to have been the vessel in which bread was baked for the funeral feast. The origin and development of the type was outlined in *Naga-ed-Dêr*, I, p. 98. The forms developed in Dynasty III were illustrated in *Naga-ed-Dêr*, III, fig. 36. Many examples were recorded in *Mycerinus*, p. 221, fig. 71, where a total of 145 vessels were mentioned. These were subdivided into a number of different forms which were generally flat bottomed. In Dynasty III these bread pots were often placed in the graves with jars of Type A–IV, but other examples were found in the debris. At Giza, in the mastabas, both types A–IV and F–XXV were numerous, usually broken and reused in the filling of the Dynasty V mastabas. It is probable that both types were used in the chapel service, as would appear from the occurrence of the vessels in the Mycerinus Valley Temple. Nevertheless, a few examples occurred in the burial chambers and seem to have been part of the original equipment.

Type F–XXV: Bread pot of coarse mud ware

i. *Cheops to mid-Chephren*

G 2210 A	frags.: 32–10–9; *Vol. I*, p. 435
G 4340 A	frags.: 13–10–67; *Vol. I*, p. 475
G 4440 A	frags.: 13–11–123 m; *Vol. I*, p. 479

ii. *Chephren to Neferirkara*

G 5190 A (equals G 2300)	1 example: 12–10–14

iii. *End of Neferirkara to end of Dynasty V*

G 5130, debris	1 example: 35–8–58. See Fig. 132
G 7144 M	1 example: 27–1–166. See Fig. 132
G 2330 (G 5380)	1 example: 12–10–71. Pl. 50 b, 3/2

iv. *Dynasty VI*

G 7491, debris	1 example: 27–3–694. See Fig. 132
G 7798, debris	1 example: 30–1–64. See Fig. 132
G 2309 A	1 example: 12–10–14. See Pl. 50 b, 3/3

GROUP F: TYPE XXVI. OFFERING TRAYS

The tray which was no doubt used for food offerings can be traced from the late Predynastic Period downwards, not in great numbers but persistent in occurrence. The early trays are generally oval in form and seem to be related to the bread pot (F–XXV). Two examples of oval trays were found in the Mycerinus Valley Temple (see *Mycerinus*, fig. 71, nos. 6 and 7). In the mastabas several circular trays were recorded, while in G 4733 E a number of rectangular trays were found which had held models of granaries.

Type F–XXVI a: Circular trays of coarse RW

ii. *Chephren to Neferirkara*

G 7060 B	1 example: 26–2–64. See Fig. 132

iii. *End of Neferirkara to end of Dynasty V*

G 4911	1 incomplete example: 15–11–83 b. See Fig. 132
G 4512	1 example: 15–12–74. See Fig. 132
G 4733 E	1 example: 14–2–123. See Fig. 133

iv. *Dynasty VI*

G 4122 A II	19 examples: 38–6–7 to 25. See Fig. 132
G 2385 X	1 example: 35–12–47. See Fig. 132

Type F–XXVI b: Rectangular tray with model granaries

iii. *End of Neferirkara to end of Dynasty V*

G 4733 E	3 rectangular trays: 1 with 3 model granaries set in place and a fourth emplacement; granaries set in plaster and closed with inverted plaster cone set in mouth, 14–2–109; 1 tray with 4 emplacements, 14–2–111; 1 tray with 3 emplacements, 14–2–110; six incomplete granaries were found which must have belonged to these emplacements, 14–2–111, 112, 113. See Fig. 133, Pl. 55 f, g

GROUP G: TYPE XLII: BOWL COVERS AND LIDS

In spite of the number of bowl covers and lids found in the Hetep-heres tomb, such covers were absent from the mastabas. The reliefs show a number of cases in which bowls, particularly those with recurved rim, were covered by a lid. The only example that could be identified as a lid was a small cover (about 6 cm. in diameter) with the clay pinched up to form a handle, which was thought at the time of its discovery to be part of an incense burner such as occur in copper forms. This (12–12–162) and part of a second similar piece were found in the Dynasty VI burial chamber in the Senezem-ib complex, G 2381 Z (see Pl. 50 b, 1/4 and 5).

APPENDIX II

THE STONE VESSELS

The stone vessels found in the tomb of Queen Hetep-heres I were all of alabaster. Only one of the twenty-six larger vessels was polished. The other large vessels had been smoothed but apparently not polished. The small cosmetic jars, of which thirteen were found (eight in the wooden cosmetic box), were better finished, but the surface of several had been affected by dampness. The total number of vessels was thirty-nine and one lid which could not be attached to a jar. The Hetep-heres examples do not include all the types found at Giza, and it has been thought useful to include here a general discussion of the Old Kingdom stone vessels from Giza, as in the case of the pottery in the preceding section, basing this on the study of the material prepared by Dr. Reisner. If not otherwise stated, the material is alabaster. An occasional large vessel is made of limestone or hard stone, while a few of the models are of limestone. In the magical sets there are a few small vessels of rock crystal or dark stone.

The old corpus of stone vessels beginning in the Predynastic Period was enlarged at three points: (1) in the reign of Menes, (2) in the reign of Zer, and (3) in the reign of Khasekhemuwy. The group of vessels found in the galleries of the Step Pyramid enlarged considerably the group found in the tomb of Khasekhemuwy and in the private tombs of Dynasty III. This group of Zoser shows the introduction of necked forms (spheroidal jars?, collar jars, and true shoulder jars) and of a one-handled jar of the necked form. In the platters and bowls, a number of rectangular examples imitating basketwork appear. The details of these have not yet been published, but it is clear that an extension of the type designations must be provided. Many of these Zoser forms are exceptional, or what Petrie called 'fancy' forms, which occur only in this tomb and had no subsequent history. In any case, it is not possible to provide a classification of the unpublished Zoser forms.

The types of vessels in the funerary equipment of the Valley Temple of Mycerinus have been given in Reisner's *Mycerinus*, pp. 130 ff. These vessels present a degeneration of the old type of Dynasty III. They are dated with few exceptions to the reign of Mycerinus, and it would appear from their rough finish that a majority of these were prepared for that king's temple. Only a few, including those marked with the names of older kings, had been taken from the storerooms of earlier temples or from funerary chapels. The classification of the vessels from the Mycerinus temple has been used as a basis for the classification of the other vessels from the Giza Necropolis. It is necessary to add to the old classification five types which appear in the Old Kingdom, some of which probably originated in the reign of Zoser. Only part of the old corpus of stone vessels is represented at Giza and these types are marked by the old designation preceded by 'OK'. In the following list of types there has also been indicated the correspondence between the new types and those of Dynasty V–VI in Upper Egypt which were designated Types OK i–xi in Reisner's *Naga-ed-Dêr*, III, pp. 61 ff.

TYPE OK I

The old cylindrical jar, a container of ointment, in the derived forms:

OK Ic: with straight sides
OK Id: with concave sides and splayed base; often with disk lid; roll or ledge rim
OK Ie: small cosmetic jar of same form as OK Id; used for the traditional ointments and for eye-paint (*kohl*)
OK If: squat forms of Id

TYPE OK III

Spheroidal jar with handles

TYPE OK IV

Shoulder jar with handles

TYPE OK V

Shoulder jar with rudimentary neck or ledge rim around mouth

OK V extra: barrel jar with cord belt
OK Va: shoulder jar with very short neck; used later for limestone canopic jars (with domed lid): (1) flat base; (2) rounded base in ring stand
OK Vb: barrel jars
OK Vd: shoulder jar with splay foot
OK Ve: shoulder jar with ledge or band rim around mouth

TYPE OK VIII

Pointed jar with rim around mouth

TYPE OK IX

Round-bottomed cups, dishes, and shallow bowls

OK IX a: dishes and shallow bowls with plain rim
OK IX b: bowls with internal rim
OK IX c: bent-sided bowls

TYPE OK X

Flat-bottomed cups, dishes, and bowls

OK X a: dishes and bowls with plain rim
OK X b: cups and bowls with spreading sides and plain rim

OK X c: bowls with internal rim
OK X d: flat tray with plain rim
OK X e: bowl with turned-in sections of rim

TYPE OK XI

Cups and bowls with external rim

OK XI b: vessels with recurved rim
OK XI c: bowl with band rim around contracted mouth

TYPE OK XII

Circular table with round stem support

TYPE OK XIII

Bowl-stands and jar-stands

OK XIII a: tall bowl-stands
OK XIII b: short jar-stands; ring-stands

ADDITIONAL TYPES

TYPE OK XIV

Long-necked jars (jugs) with one handle connecting rim and shoulder; probably introduced in tomb of Zoser

OK XIV a: large jar (jug) with rim around mouth and flat base or disk base. One example in G 2120
OK XIV b: small cosmetic jugs (*ẖnm*-jug), with rim and flat base. Three examples in Hetep-heres tomb and many models

TYPE OK XV

Jars with well-defined neck and roll rim or ledge

OK XV a ('OK i'): shoulder jar with flat bottom: (1) broad forms, (2) slender forms, (3) slender *ḥs*-form with splay foot
OK XV b ('OK ii'): shoulder jar with tapering body, round pointed base or with flat spot on tip of base; all varieties require ring stands or similar support to stand upright: (1) broad forms, (2) slender forms
OK XV c ('OK iii'): ovoid body with flaring neck: (1) flat base, (2) pointed base

TYPE OK XVI

Jars with collar neck: copper forms

OK XVI a ('OK v'): collar jar with flat base: (1) broad forms, (2) slender forms, (3) with splay foot
OK XVI b ('OK iv'): collar jar with tapering body and pointed base
OK XVI b: with ring stand ('O.K. vi') collar jar with ring-stand in one piece

TYPE OK XVII

Spherical jars with short flaring neck with plain mouth

OK XVII a 'OK vii'): with nearly spheroidal body, round base
OK XVII b ('OK viii'): with broad flat or nearly flat base

No examples occur at Giza

TYPE OK XVIII

Model of oil jar (pottery type B-LIV)

The vessels and models listed for the tomb of Hetep-heres I and the early mastabas of the Western Field establish the new corpus of the Old Kingdom in its dominating features. The succeeding mastabas include those of the Eastern Field (the eight twin-mastabas, the two additions of the six and eight mastabas) and the mastabas of the third addition to Cemetery G 4000. There are other isolated tombs of Dynasty IV and the early part of Dynasty V in both the Western and Eastern Fields. Unfortunately, the stone vessels in these plundered chambers were fragmentary, and the instructive groups of models were confined to scattered mastabas. The material, defective as it is, confirms the use of the new corpus of OK vessels. The burial chambers of the twin mastabas of the Eastern Field had been completely cleared out. In the débris of the streets and avenues a number of fragments of vessels of Type I d and X c and other less certain forms were found, but the provenance of these could not be determined. A few model bowls were also found. The few examples which could be assigned will be listed under the different type designations in the following text. The same condition of plundered chambers and confused debris was found in and around the mastabas of the first and second additions to Cemetery G 7000. The confused debris again contained fragments of large bowls and cylindrical jars as well as a few scattered models.

The mastabas which are representative of the second half of Dynasty IV and the early part of Dynasty V are those in rows 3–1 in Cemetery G 4000, a few mastabas in the latter part of Cemetery G 2100 and the Cemetery en echelon (G 2150, G 5080, and so forth), and three shafts in the Eastern Cemetery (G 7130 X, G 7440 Z, and G 7560). These are listed under Dynasty IV in the following type groups. The examples are almost exclusively models. The notable points in the groups are (1) the decrease in size and finish of the models, and (2) the introduction of limestone instead of alabaster. These changes seem to be only significant of the decreasing means of the persons concerned.

Very few practical vessels were recovered from the mastabas of the end of Dynasty IV. The distinction between old and new forms is hardly significant. For example, the great proportion of flat-bottomed bowls presents the continuation of a long series beginning with Dynasty I. The best indication is the relation between the old and new types of jars. The characteristic new forms with neck are about 7 per cent of the whole and give to the new corpus its characteristic appearance, clearly distinguishing it from the old.

The corpus of stone vessels which appeared in the tomb of Hetep-heres I and was established in a fuller form by the material found in the burial chambers of Dynasty IV continued in use in Dynasties V and VI. Again, this consists mainly of models. The few practical vessels which have been found were cosmetic jars and dishes. The large and important tombs have, again, been badly plundered, and the vessels found probably represent only a fraction of the original contents. In the small unplundered burial chambers, even dummy models are extremely rare, and it is to be noted that only persons of means could afford a set of models for their funerary equipment. The limestone models in the later tombs, particularly in the poor tombs along the eastern edge of the Eastern Field, form over one-fourth of the total number of models. The fact is significant only of the increasing poverty of the community. The forms, both of alabaster and of limestone taken together, show no marked changes, except that in the Western Field there was a decrease in the use of models in Dynasty VI, but even this may be due to accidents of preservation.

These observations are confirmed by the stone vessels found by Junker in the Western Cemetery and by Selim Hassan in the area west of the Great Sphinx, as well as those reported by Gustave Jéquier from his excavations of the Pyramid of Pepy II and its surrounding cemetery of Dynasty VI. The material from Junker's early mastabas has been incorporated in the following type groups.

Although a few fine practical vessels were found by Jéquier in the burial chamber of Pepy II and in that of Queen Neith, none appear in the Dynasty V–VI mastabas at Giza illustrated in Junker's *Giza*, II–VIII, or in Selim Hassan's *Excavations at Giza*, I–V. Nor do any new types appear in these Giza tombs. They do provide a limited number of sets of model vessels. Models occur in the tomb of Ka-ni-nesut (Junker, *Giza*, III, pl. IX), in that of Ka-pu-ptah (*Giza*, VI, pl. XXI), in Shaft 316 in the street east of G 5070 (*Giza*, VII, p. 55, fig. 21), and in the tomb of Ptah-hotep (*Giza*, VII, pl. XXXVIII a). Selim Hassan illustrates models of cups and saucers in *Excavations at Giza*, I, p. 91, fig. 153, and in vol. III, p. 31 and pl. XIV three alabaster saucers inscribed with the name of that Prince Kay, a descendant of Queen Kha-merer-nebty II, whose model stone vessels were found at the Third Pyramid (Reisner, *Mycerinus*, p. 199). Also early, probably of the end of Dynasty IV, is the set of alabaster model vessels from the rock-cut tomb of Prince Ny-ankh-ra in the Chephren family cemetery (Selim Hassan, *loc. cit.*, vol. IV, p. 157, fig. 110, pls. XLIV, XLV. Shaft 294 (*loc. cit.*, vol. II, pp. 141–144, pl. XLVI) contained eighty model alabaster vessels, while the tomb of Der-semat (*loc. cit.*, vol. III, pp. 12–13, pl. IV) had preserved parts of a magical set (two cups of Type X b and a vase of Type XV c (2)). Alabaster model dishes were also found in the tomb of Fefy (*loc. cit.*, vol. V, pl. LVI). The tomb of Ankh-haf produced a set of limestone model vessels (*loc. cit.*, vol. III, pp. 145–146, figs. 123, 124, pl. XLV) and Shaft 648 some forty-eight more limestone examples (*loc. cit.*, vol. III, pp. 229 ff., pl. LXIV). A few more limestone models appeared in the tomb of Wash-ptah (*loc. cit.*, vol. III, pl. II) and that of Ka-meny (*loc. cit.*, vol. III, pl. XXX). Thus the evidence from Giza seems consistent for the disappearance of practical vessels, the decrease in the number of models, and the increase in the use of limestone as the Old Kingdom advanced.

TYPE OK I. THE OLD CYLINDRICAL JAR, A CONTAINER OF OINTMENT

Type OK I c: With straight sides

The cylinder jar of Type I c with straight sides did not occur in the Hetep-heres tomb. This type occurs in the Giza mastabas only in the form of a model. Ten examples were found in the Dynasty IV mastaba G 4530 A: No. 14–1–67 (*Vol. I*, p. 489, fig. 297 b). See Fig. 134.

In the Dynasty V and VI mastabas the following models were found:

Dynasty V (OK I c)

G 4341 A	1 model: 14–1–90
G 6020 A	6 models: 25–12–92
G 5480 A (old number G 2340)	1 model: 33–2–191
G 2370 A	1 model: 12–11–28. See Fig. 134
G 7111 C	5 models: 25–1–443 to 447.
G 7524 C	3 models: 29–4–9 to 11
G 7710 B	3 models: 25–2–1110, 1112, 1114

Dynasty VI (OK I c)

G 2385 X	1 model: 35–12–44. See Fig. 134
G 2387 A (chief shaft of G 2385)	1 model: 12–12–586 a
G 7794 A	2 models: 30–12–159, 160

Type OK I d: Cylindrical jar with concave sides and splayed base

In the Hetep-heres tomb (G 7000 X) were found nine cylindrical jars among the contents of several boxes which had been placed immediately south of the alabaster sarcophagus and had decayed, spilling out their contents (Pls. 6, 42). Arranged in order of their size, the jars were as follows:

(1) 1043: perfect, Type OK I d: height 21·8 cm., diameter of rim 13·8 cm.; smoothed inside; with disk lid found in place; resinous contents. Pl. 42 a, 2/3; Fig. 135, 2/1.

(2) 1038: slightly chipped on rim and base, Type OK I d: height 18 cm., diameter of rim 10 cm.; smoothed inside. Pl. 42 a, 2/1; Fig. 135, 2/2.

(3) 1032: complete, with surface decayed, Type OK I d: height 18 cm., diameter of rim 11·7 cm.; smoothed inside. Pl. 42 a, 2/5; Fig. 135, 2/3.

(4) 1042: perfect, Type OK I d: height 16 cm., diameter of rim 12 cm.; smoothed inside; with domed lid, No. 644 (which probably does not belong to this vase). Pl. 42 a, 1/4; Fig. 135, 2/4.

(5) 1083: perfect, with surface decayed in parts, Type OK I d: height 15·8 cm., diameter of rim 9·4 cm.; rim with beveled edge. Fig. 135, 1/5.

(6) 1040: perfect, Type OK I d: height 15·4 cm., diameter of rim 9·4 cm.; roll rim; smoothed inside. Fig. 135, 1/4.

(7) 1041: perfect, Type OK I d: height 15·2 cm., diameter of rim 11·6 cm.; smoothed inside; 2 cm. intrusive black matter in bottom. Pl. 42 a, 1/2; Fig. 135, 1/3.

(8) 1235: perfect, Type OK I d: height 15·2 cm., diameter of rim 10 cm.; smoothed inside; top and base not level; tube bored. Pl. 42 a, 1/5; Fig. 135, 1/2.

(9) 1039: complete, somewhat decayed, Type OK I d: height 14·6 cm., diameter of rim 9 cm.; smoothed inside; tube bored, Pl. 42 a, 1/1; Fig. 135, 1/1.

Vessels of Type I were used for ointments and oils from the beginning, and those of Type I d had the same function. It is the form which is reproduced by Type I e which differed only in size and included six of the small jars found in the wooden toilet box. The last two numbers, 8 and 9, were tube bored and had the thick bottom characteristic of the small cosmetic jars. It is difficult to distinguish between the small jars of Type OK I e and the large jars of Type OK I d. The largest of the jars of Type OK I e with a height of 11 cm. might have been included under Type OK I d.

The larger examples of Type OK I d, Nos. 1–7, were bored with the weighted crank borer as is shown by the curve at the bottom inside, and were afterwards carefully smoothed. All the ointment jars of Type OK I e were covered with a disk lid tied on and sealed. One of the examples of Type OK I d, No. 1, was found with a disk lid in place, and other examples found elsewhere confirm the conclusion that the examples of Type OK I d were closed normally with the disk lid. The domed lid, No. 644, which was photographed with jar No. 4, did not belong to that jar. The domed lid was used on the shoulder jars and on the later canopic jars.

In the Nucleus Cemeteries of the Western Field at Giza three fragments of full-sized vessels and two models were found in Cemetery 1200, where the burial equipment was nearly completely destroyed. Two models were found in the debris of Cemetery G 4000.

Cheops-Chephren period (Type OK I d)

G 1203	1 jar (*Vol. I*, p. 391)
G 1223	2 jars and 2 models (*Vol. I*, p. 400, fig. 227 a)
Cem. G 4000 debris	2 models (Junker, *Giza*, I, p. 111, fig. 11, nos. 4, 5)

The stone vessels had been almost completely cleared out of the large early mastabas in the Eastern Field. None of Type I d survived. In the later mastabas of Dynasty IV a few occurred as follows:

Dynasty IV (Type OK I d)

G 7350 A	1 model: 28–8–19
G 7550 B	3 models: 28–5–181. See Fig. 136
G 7130 X (in mastaba G 7133)	1 model: 25–1–390
G 7440 Z (in mastaba G 7442)	3 models: 25–5–26
G 4530 A	2 models: 14–1–68 (*Vol. I*, fig. 297 b)
G 1407 A	1 large jar: 34–9–4. See Fig. 136; Pl. 45 l
G 5080 B (G 2200)	1 model: 33–2–109
G 2150 A	2 models: 33–1–35, 63 (*Vol. I*, fig. 267)
G 4610 A	4 models: 15–11–51, 35–4–1 f (*Vol. I*, fig. 323)

The mastabas of Dynasty V and VI at Giza contained vessels of Type I d as follows:

Dynasty V

G 4631 B	6 models: 14–1–36 (*Vol. I*, fig. 304 b)
G 4520 A	6 models: 14–4–3 (*Vol. I*, fig. 310)
G 4714 A	1 model: 35–12–7
G 4733 E	8 models: 14–2–46, 78, 80
G 5230 A	1 model: 33–1–81
G 4811 B	1 model: 35–11–69
G 1208 B	1 model: 35–5–10
G 7111 C	1 model: 25–1–422
G 7111 D	3 models: 25–1–1286, 1287, 1288
G 7710 B	2 models: 25–2–1111, 1113

Dynasty VI

G 5232 A	4 models: 14–11–173, 192, 193, 194
G 7832 D	2 models: 31–1–503
G 7931 B	1 model: 30–12–29
G 2089 A	1 large jar: 38–4–32; inscribed in black ink in hieratic: *śḥḏ ḫnty-š pr ꜥꜣ Nfr-ḳd*. Fig. 136; Pl. 45 h

Type OK I e: Small cosmetic cylinder jars

The wooden toilet box of Queen Hetep-heres I contained eight small jars, six examples of the cylinder jar (Type OK I e), and two of the *ḫnm*-jars (for *nḫnm*-ointment). The position of the jars in the box could not be determined. All the jars had a hieroglyphic mark which indicated the contents, and five disk lids were found among the jars which had the name of the contents written out vertically. One other inscribed lid was found which fitted on one of the cylindrical jars, but the lids of the *ḫnm*-jars were not found and they may not have had lids. The cylindrical jars contained *ḥꜣt ꜥš*, *ḥꜣt ṯḥnw*, *śfṯ*, *ḥknw śṯy ḥb* and *wꜣḏt* (green eye-paint). The two *ḫnm*-jars contained *nḫnm* and *twꜣwt*. The seven traditional ointments were later represented by small rectangular plates ('ointment tablets') on which the seven names were inscribed vertically each above a small round depression. In addition to the small jars in the toilet box, three other small cylindrical jars were found and one extra *ḫnm*-jar.

The Hetep-heres jars of Type OK I e were as follows:

(1) 1196: badly decayed on rim and side, Type OK I e: height 11 cm., diameter of rim 6·6 cm.; tube bored. Fig. 137
(2) 1012: perfect, with disk lid, Type OK I e: height 7·8 cm., diameter of rim 6 cm.; tube bored. Fig. 137
(3) 1031: perfect, Type OK I e: height 7·6 cm., diameter of rim 6·4 cm.; tube bored. Fig. 137
(4) 1082: slight decay on rim, Type OK I e: height 7·6 cm., diameter of rim 5·2 cm.; tube bored. Fig. 137

From the toilet box (see Fig. 41; Pl. 34):

(5) 142+131: perfect, Type OK I e: with thick disk lid; height 7·6 cm., diameter of rim 5·6 cm.; inscribed vertically on lid: *śṯy ḥb* (det. cyl. jar) and on ledge rim the single letter *ś*
(6) 141+1077 (19): perfect, with disk lid (?), Type OK I e: height 7·6 cm., diameter of rim 5·2 cm.; inscribed vertically on lid: *mśdmt* (det. 4 strokes) and on ledge rim the hieroglyph *wꜣḏ*

(7) 140+134: perfect, Type OK Ie: with disk lid; height 7·6 cm., diameter 5·2 cm.; inscribed vertically on lid: *ḥknw* (det. cyl. jar) and on ledge rim single sign *k*

(8) 139+135: perfect, with disk lid, Type OK Ie: height 7·6 cm., diameter of rim 5·2 cm.; inscribed vertically on lid: *ḥꜣt ʿš* (det. cyl. jar) and on ledge rim the sign *ʿ*

(9) 143+133: perfect, with disk lid, Type OK Ie: height 7·6 cm., diameter of rim 5·1 cm.; inscribed vertically on top of lid; *śfṯ* (det. with *ẖnm*-jug) and on ledge rim the sign *ṯ*

(10) 138+132: perfect, with disk lid, Type OK I e: height 7·6 cm.; diameter of lid 5·1 cm.; inscribed vertically on lid: *ḥꜣt ṯḥnw* (det. cyl. jar) and on ledge rim the sign *nw*

All these ointment jars were tube bored. The core was broken off and the bottom smoothed off, leaving in a few cases the circular mark made by the edge of the tube-borer. The striated marks on the sides were also smoothed away. The characteristic thickness of the bottom was probably a device to prevent upsetting, although it resembles a trick often used to deceive the buyer as to the amount of oil he was getting. The three *ẖnm*-jars will be described under Type OK XIVb.

A few vessels of Type Ie were found in the early mastabas of the Western Field.

Type OK Ie

Dynasty IV

G 4240 A	1: 13–11–58 (*Vol. I*, fig. 282)
G 4640 A	1: 13–12–10 (*Vol. I*, fig. 291)

Type OK If. Squat forms of Id, two examples

Dynasty VI

G 5552 (G 2359)	1 model: 33–3–43. See Fig. 138
G 7147 B	1 black granite example: 37–8–6. See Fig. 138; Pl. 45k

TYPE OK III. SPHEROIDAL JAR WITH HANDLES

One jar of this type was found in the Western Cemetery in G 2038 d C. It was thought to have been intrusive from one of the older Dynasty IV shafts in Cemetery 2100.

G 2038 d C	1 example, diorite with ledge handles: 37–11–19; height 11·7 cm., maximum diameter 18·6 cm. See Fig. 139; Pl. 45k

TYPE OK IV. SHOULDER JAR WITH HANDLES

This type occurred only in one limestone model from the Western Cemetery.

G 2005	1 limestone model: 36–3–27. See Fig. 139

TYPE OK V EXTRA. SHOULDER OR BARREL-SHAPED JAR WITH CORD NET

The flat-bottomed shoulder jar with roll or ledge rim and flat base developed in Dynasty III into a series of forms, partly shoulder jars and partly barrel-shaped jars, and these forms appeared in the vessels of Mycerinus. Many of these were small dummy forms as early as Dynasty III. The large forms included a great wine jar with cord net carved in relief which has been designated Type V extra. In the Mycerinus group, one small shoulder jar was found which had this net pattern in relief. At Giza this form, Type V extra, did not occur in the Hetep-heres tomb, nor as far as I know has any large example been found. Nevertheless, the type occurs in a number of models found in the early mastabas of the Western Field and continues through Dynasties IV and V. The jar is either a flat-bottomed shoulder jar or a barrel-shaped jar with a cord net marked in one of several ways. In the best examples, the cord net is represented by a belt in relief around the body with a diagonal pattern of incised lines indicating the net. In other cases the belt has degenerated until it is merely indicated by horizontal grooves around the body. The early examples are as follows:

Dynasty IV (Type OK V extra)

G 4150 A	2 alabaster models (*Giza*, I, p. 111, fig. 11, nos. 15, 16)
G 4250 A	1 alabaster model (*Giza*, I, p. 111, fig. 11, no. 14)
G 4530 A	7 models: 14–1–70 (*Vol. I*, fig. 297 b). See Fig. 140
G 7350 A	1 model: 28–8–12. See Fig. 140

There were also a few examples in the mastabas of Dynasties V and VI.

Dynasty V (Type OK V extra)

G 4733 E	2 models: 14–2–81
G 7710 A	1 model: 25–3–192
G 7710 B	2 models: 25–2–1115, 1157

Dynasty VI

G 5232 A	2 models: 14–11–187, 188

Type Va: Shoulder jars

The old type of shoulder jar without neck or with only a faint indication of a neck was rare in the Old Kingdom except as used in the limestone canopic jars. The fragments of one example were found in G 1223 and three dummy models were found in Cemetery 4000. The form was used in the Mycerinus group, and the models of the form continue throughout the Old Kingdom. Three practical examples of Type Va were found in the burial chamber of Pepy II (G. Jéquier, *Le Monument Funéraire de Pepy II*, p. 7, fig. 6; and *Annales du Service*, 34, 1934, p. 100, figs. 8, 9, p. 103, fig. 12).

Type Va (1): Flat base

Dynasty IV

G 1223 A	fragment of a large jar
G 4150 A	alabaster model (Junker, *Giza*, I, p. 111, fig. 11, no. 18)
G 4260 (?)	model (*Giza*, I, p. 111, fig. 11, no. 7)
G 4250 A	model (*Giza*, I, p. 111, fig. 11, no. 17)

G 7330 B	13 limestone models: 27–1–340. See Fig. 140
G 4530 A	6 models: 14–1–58, 66 (*Vol. I*, fig. 297 b)

Dynasty V

G 4631 B	2 models: 14–1–39 (*Vol. I*, fig. 304 b)
G 5030	1 model: 15–1–26. See Fig. 140
G 1031 A	1 jar of black and white hornblende, height 25 cm., maximum diameter 20·1 cm. See Fig. 140; Pl. 45 g (California No. 6–19764)
G 7766 B	2 models: 30–1–43, 49. See Fig. 140
G 4811	1 limestone dummy jar, height 28·6 cm.: 35–11–64. See Fig. 140

Dynasty VI

G 2385 X	1 model: 35–12–43

Type V a (2): Rounded base (in ring stand)

Dynasty V

G 2353 B	1 example, limestone, height 25·5 cm.: 12–11–49. See Fig. 140

Type V b: Barrel-shaped jars

Dynasty V

G 4714 A	1 model: 15–12–24. See Fig. 140
G 4813 D	1 limestone dummy jar: 35–11–89. See Fig. 140
G 7710 B	4 models: 25–2–1092, 1107 to 1109. See Fig. 140

Dynasty VI

G 5232 A	3 models: 14–11–189, 190, 191. See Fig. 140
G 2387 A (chief shaft of G 2385)	3 models: 12–12–587 to 589. See Fig. 140
G 7132 A	2 models: 24–12–543, 544. See Fig. 140

Type OK V d: Shoulder jar with splay foot

This type which occurs in Dynasty I (see *Mycerinus*, fig. 28, no. 11) was found in five models from G 7440 Z in Dynasty IV.

G 7440 Z	5 models: 27–5–25. See Fig. 140

Type OK V e: Shoulder jar with ledge or band rim around mouth

One of the most common forms in the Mycerinus collection was the tall or squat shoulder jar with a flat (ledge) rim around the mouth, often made in two pieces (Type V e). This form appears only rarely (or not at all) elsewhere in the Old Kingdom. A similar form, the 'neckless shoulder jar' occurs in copper with a spout (ewer) and in pottery without a spout. Stone models of the old form V e are not recorded although two examples with spout, but without the band rim, were found in G 4140 and in G 4530. In Cemetery 4000, Junker found the fragments of two alabaster jars which appear to have been of Type V e.

Dynasty IV

G 4000, debris	alabaster fragments, height 15·5 cm.; decorated with incised lines; Junker, *Giza*, I, p. 110, fig. 10, no. 3.
G 4150 A	alabaster fragments, diameter at shoulder 25·8 cm.; rim missing; *Giza*, I, p. 110, fig. 10, no. 2
G 4140 A	alabaster model with spout and no indication of rim; height 6·6 cm. (*Vol. I*, fig. 279); called Type X e in *Mycerinus*, p. 177, and Type X d in *Vol. I*, p. 463: 13–11–6
G 4530 A	1 model with spout and no indication of rim: 14–1–65; *Vol. I*, fig. 297 b
G 7440 Z	1 model of ewer (without spout) and basin: 27–5–28. See Fig. 140

Dynasty V

G 5170	model ewer and basin; *Giza*, III, p. 215, fig. 39 (cf. Selim Hassan, *Excavations at Giza*, III, pl. LXIV)

Dynasty VI

G 2378 A	1 alabaster model, height 3·4 cm.: 12–12–213

TYPE OK VIII. POINTED JAR WITH RIM AROUND MOUTH

Type VIII begins clearly in the late Predynastic Period (see *Mycerinus*, p. 136) and is continued in Dynasty I. Only a few examples are known. The jar with slender tapering body and pointed base was frequent in the Old Kingdom in the types OK XVI and XVIII, all with necks. In the Mycerinus group one example occurs with very short neck (*Mycerinus*, p. 183). The isolated example of a model with tapering body and roll rim around the mouth, found in G 2120 A, is curious but not particularly significant. It may be only the whim of some craftsman or even have resulted from the recarving of the top of a broken jar of Type XV b (32–12–16; *Vol. I*, fig. 245).

ADDITIONAL JAR TYPES OK XIV–XVIII

In order to facilitate the discussion of the jar types, the additional types XIV to XVIII will be discussed here, and the bowl types, tables, and stands, Types IX–XIII, will be taken up later.

TYPE OK XIV. JARS WITH LONG NECK AND ONE HANDLE

The long-necked jar with one handle joining rim and body has been found in the great collection of vessels in the tomb of Zoser. No large example was found in the Hetep-heres tomb and only one in the early mastabas at Giza. Three small practical examples (Type XIV b) used as cosmetic jars were recorded in the Hetep-heres tomb. Two of these jars were found in the wooden toilet box, and a third was found lying elsewhere in the chamber. A long series of models have been found at Giza extending from Dynasty IV to VI, and these appear to be models not of the large jar, Type XIV a, but of the small cosmetic jar, XIV b. No example of the model form was found in any of the early mastabas of the Western Field, but this was probably due to an accident of preservation.

Type OK XIV a

Dynasty IV

G 2120 A alabaster, bulging body with ring base, long neck, ledge rim with three pierced ears on under side (for tying on lid); handle from just below rim to middle of body which is in one piece with ring stand; domed lid; height 29·8 cm.; max. diameter 16·8 cm.; 33–1–77 (*Vol. I*, fig. 245), Cairo Museum. See Pl. 45 e

Type OK XIV b

Dynasty IV

The examples from the tomb of Hetep-heres I are as follows:

(1) 679+675 (117): broken, incomplete; height 10·8 cm.; max. diameter 6·8 cm.; bored with tube and boring widened by rubbing inside shoulder. Fig. 141

From wooden toilet box:

(2) 136: perfect; height 7·6 cm.; max. diameter 5·8 cm.; inscribed on ledge of rim: *ẖnm* (or *nẖnm*); no lid found. Fig. 41; Pl. 34

(3) 137: perfect; height 9·4 cm.; max. diameter 6·6 cm.; inscribed on ledge of rim: *twꜣ*; no lid found. Fig. 41; Pl. 34

Numbers 2 and 3 were tube bored and had the cavity smoothed inside. Both names for ointment are well known from the ointment tablets. On these tablets *śfṯ* and *nẖnm* are usually determined with the *ẖnm*-jug, while *twꜣwt* is determined by a cylinder jar.

The model jars of Type XIV b from the Giza Cemetery are as follows:

Type OK XIV b

Dynasty IV

G 7070 B	1 model: 29–10–8. See Fig. 141
G 4410 B	1 model: 15–12–62 (*Vol. I*, fig. 318)
G 4610 A	1 model: 15–11–53 (*Vol. I*, fig. 323)
G 7440 Z	1 model: 27–5–27

Dynasty V

G 4520 A	1 model: 14–4–2 (*Vol. I*, fig. 310)
G 4631 A	1 model: 14–1–38 (*Vol. I*, fig. 304 b). See Fig. 141
G 4733 E	1 model: 14–2–50
G 6020 A	1 model: 25–12–29
G 6010 A	1 model: 25–11–116
G 2360 A	1 model: 12–11–6
G 2353 B	1 model: 12–11–47
G 7111 C	1 model: 25–1–439
G 7710 B	1 limestone model: 25–2–1101

Dynasty VI

G 5232 A	1 model: 14–11–182

TYPE OK XV. THE SHOULDER JAR WITH NECK

The old type of shoulder jar of Type V took two forms, a tall jar with short neck or without neck and a jar with wide shoulder and ledge rim with extremely short neck. In the Old Kingdom a new form appears with shoulder, a marked neck, and a ledge rim. This form was designated in *Naga-ed-Dêr*, III, Type OK i. It appears in the tomb of Hetep-heres in two large practical examples and is given a new designation, Type OK XV a (1). One of the characteristics of the corpus of Old Kingdom stone vessels is the longer neck, represented by the one-handled jars (OK XIV), the splay-footed slender form of *ḥs*-jar (OK XV a (3)), and the collar jars (OK XVI). The practical examples range from large jars to slender small jars, obviously used for cosmetics of some sort. The model dummies are generally of Type XV a. In general use with these necked jars was the domed lid with projecting plug fitting into the mouth of the jar, and this domed lid was adopted for the limestone canopic jars.

This jar with the well-defined neck does not appear amongst the vessels of the Mycerinus Pyramid, but it is found at the end of Dynasty VI in the perfume jars from the tomb of Pepy II. Large models also occur in the tomb of Queen Neith and in one of the courtiers' tombs, that of Wazet (M XII at South Saqqarah). Type XV a (1) appears in three practical vessels from the burial chamber of the pyramid of Pepy II (G. Jéquier, *Annales du Service*, 34, 1934, pp. 97 ff., figs. 3, 5, 6; and *Le Monument Funéraire de Pepy II*, I, 1936, p. 7, fig. 6), in a model of Queen Neith (*Annales*, 34, p. 112, fig. 19, e) and three models from M XII (Jéquier, *Tombeaux de Particuliers*, p. 83, fig. 95). These vessels show the late Old Kingdom tendency to increase the height of the jar. The *ḥś* jar (Type OK XV a (3)), without spout, appears in one example from the tomb of Pepy II (*Annales*, 34, p. 98, fig. 1). The collar jar (Type OK XVI) is known in models from M XII (*Tombeaux de Particuliers*, figs. 94, 95).

The examples of Type OK XV a (1) in the Hetep-heres tomb are as follows:

(1) 1234–1033: perfect; polished; height 31·6 cm., max. diameter 29·2 cm.; smoothed inside; with domed lid. See Fig. 142; Pl. 42 b.

(2) 1029: perfect; height 18·6 cm., diameter shoulder 14·6 cm.; smoothed inside; no lid found. See Fig. 142; Pl. 42 a, 2/2.

In addition to the broad shoulder jars described above, the Hetep-heres vessels include one of Type OK XV b:

1030: perfect; height 22 cm., diameter shoulder 11 cm.; with upright tubular spout. Formed in one piece with ring-stand, with roll rim at top and bottom. See Fig. 142; Pl. 42 a, 1/3.

This is the only occurrence at Giza of this type of shoulder jar with tapering body and round-pointed base, set in a ring-stand. A somewhat similar form, without spout, is listed below from G 4160 A, and a model was found in the debris of Cemetery 4000. A very much closer parallel exists in the Dynasty VI model with spout and ring-stand from the tomb of Queen Neith (G. Jéquier, *Fouilles à Saqqara, Les Pyramides de Neit et*

Apouit, 1933, p. 32, fig. 14). Two other somewhat similar Dynasty VI models with spout and ring-stand, but without neck, also came from the tomb of Queen Neith (Jéquier, *Annales du Service*, 34, 1934, p. 112, fig. 19 a, b).

The jars and models of Type OK XV from the Giza Cemetery are listed as follows:

Type OK XV a (1)

Dynasty IV

G 2100 D	1 large jar; *Vol. I*, fig. 239, pl. 43 e
G 4000, debris	fragment of neck with roll rim; Junker, *Giza*, I, p. 110, fig. 10, no. 6
G 4150	1 large jar, slender form; *Giza*, I, p. 110, fig. 10, no. 1
G 4530 A	1 model: 14–1–60; *Vol. I*, fig. 297 b
G 4610 A	4 models: 15–11–54, 55, 35–4–1 d; *Vol. I*, fig. 323
G 7070 B	1 model: 29–10–9. See Fig. 143
G 7430 C	1 model: 25–2–174
G 7550 B	1 model: 28–5–183. See Fig. 143

Dynasty V

G 4520 A	2 models: 14–4–5, 6; *Vol. I*, fig. 310
G 4631 B	4 models: 14–1–35; *Vol. I*, fig. 304 b
G 6020 A	4 models: 25–12–87, 90. See Fig. 143
G 5380 (G 2330 A)	4 models: 12–10–26 to 29. See Fig. 143
G 1208 B	1 model: 35–5–11
G 7111 C	6 models: 25–1–446, 452 to 455, 457
G 7710 A	1 model: 25–3–179

Dynasty VI

G 7132 A	1 limestone model: 24–12–542
G 7753 A	7 limestone models: 29–12–167, 168. See Fig. 143

Type OK XV a (3): ḥs jar

Dynasty IV

G 4250 A	1 model with long spout; Junker, *Giza*, I, p. 111, fig. 11, no. 1
G 4250 A	1 model without spout; *Giza*, I, p. 111, fig. 11, no. 2
G 7560 B	1 model without spout: 36–12–27. See Fig. 143

Dynasty V

G 4714 A	1 model without spout: 15–12–25

Dynasty VI

G 2381 A	2 models without spout: 12–12–579, 580

Type OK XV b: Shoulder jar with tapering body and round-pointed base

Dynasty IV

G 4000, debris	1 model; *Giza*, I, p. 111, fig. 11, no. 6
G 4160 A	small practical jar; *Giza*, I, p. 111, fig. 11, no. 19

Type OK XV c: Jars with ovoid body and flaring neck

Examples of Type XV c are found at the end of Dynasty VI among the large models from the tomb of Wazet (M XII) (G. Jéquier, *Tombeaux de Particuliers*, p. 83, fig. 95). One practical example appeared in the tomb of Queen Neith, the wife of Pepy II (Jéquier, *Annales du Service*, 34, 1934, p. 112, fig. 19 d). The examples from Giza are as follows:

Type OK XV c (1): Ovoid body with flaring neck and flat base

Dynasty IV

G 4250 A	1 model; Junker, *Giza*, I, p. 111, fig. 11, no. 3
G 7550 B	1 model: 28–5–182. See Fig. 143
G 7560 B	2 models: 36–12–26. See Fig. 143

Type OK XV c (2): Ovoid body with flaring neck and pointed base

Dynasty VI

G 2381 A	6 models: 12–12–251, 286, 416 (slate); 12–12–252, 254, 415 (crystal). See Fig. 143

TYPE OK XVI. JARS WITH COLLAR NECK: COPPER FORMS

The collar jar has the same form as the shoulder jar of Type XV, but its neck is decorated with a sort of collar which probably originated in a copper form. The form is established by an example in the Hetep-heres tomb, and the seven models found in Cemetery G 4000 make it clear that the form was known previous to that cemetery. All these models are of the variation with flat base (Type XVI a), but in the later groups and in the pottery models, the variation with the pointed base also occurs, like the example in the Hetep-heres tomb (Type XVI b).

Type OK XVI a: Collar jars with flat base

Dynasty IV

G 4000	1 model; Junker, *Giza*, I, p. 111, fig. 11, no. 8
G 4150 A	3 models; *Giza*, I, nos. 11, 12, 13
G 4250 A	2 models; *Giza*, I, nos. 9, 10
G 4140 A	1 model: 13–11–7; *Vol. I*, fig. 279. See Fig. 144
G 4610 A	1 model: 35–4–1 e; *Vol. I*, fig. 323
G 4510 A	1 model: 15–12–35 a; *Vol. I*, fig. 321
G 4530 A	4 limestone models: 14–1–63, 69; *Vol. I*, fig. 297 b
G 7210 B	1 incomplete model: 25–1–65
G 7440 Z	5 models: 27–5–24. See Fig. 144

Dynasty V

G 4733 E	8 models: 14–2–83, 84, 85, 86, 87
G 4714 A	2 models: 15–12–26, 27
G 4811 B	1 model: 45–11–70
G 2353 B	3 models: 12–11–41. See Fig. 144
G 2360 A	2 models: 12–11–7, 8. See Fig. 144
G 5232 A	5 models: 14–11–183 to 186, 196

G 6020 A	5 models: 25–12–30, 90, 93
G 7710 B	5 limestone models: 25–2–1102 to 1106
G 7132 A	2 models: 24–12–1010, 1011
G 7111 C–D	5 models: 25–1–1291, 448–451

Type OK XVI b: Collar jars with pointed base

The example from the Hetep-heres tomb is as follows:

1228	complete but with decayed surface; ring-stand; height 23·5 cm.; diameter collar 10 cm. See Fig. 144; Pl. 42 a, 2/4

Dynasty IV

G 4530 A	1 limestone model: 14–1–59; *Vol. I*, fig. 297 b. See Fig. 144
G 4610 A	4 models: 15–11–52; *Vol. I*, fig. 323
G 7070 B	1 model with ring-stand: 29–10–7. See Fig. 144

Dynasty V

G 4520 A	2 models: 14–4–1; *Vol. I*, fig. 310
G 4631 A	2 models: 14–1–37; *Vol. I*, fig. 304 b
G 7761 B	1 model: 29–11–502. See Fig. 144
G 7132 A	4 limestone models: 24–12–541, 1007–1009
G 7111 C–D	4 models: 25–1–448 to 451, 1291

TYPE OK XVII: SPHERICAL JARS WITH SHORT FLARING NECK AND PLAIN MOUTH

The type does not occur at Giza but is found at Naga-ed-Dêr under the headings OK vii and viii. Two somewhat similar bag-shaped jars were found in the Dynasty VI tomb of Queen Neith, but one of these had a rudimentary neck and the other a straight, vertical neck with roll rim (G. Jéquier, *Les Pyramides des Reines Neit et Apouit*, p. 32, fig. 15; and *Annales du Service*, 34, 1934, p. 112, fig. 19 h).

TYPE OK XVIII: MODEL OF OIL JAR (POTTERY TYPE B–LIV)

A fine example of a practical vessel of Type OK XVIII was found in the burial chamber of Pepy II (G. Jéquier, *Le Monument Funéraire de Pepy II*, p. 7, fig. 6; and *Annales du Service*, 34, 1934, p. 103, fig. 11). There is a considerable resemblance between this jar and the two-handled pottery jars of Type B–LIV with their combed surface patterns.

One Dynasty V model of Type OK XVIII was found in the Western Cemetery at Giza:

G 4733 E	1 model: 14–2–8. See Fig. 144

TYPE OK IX: ROUND-BOTTOMED CUPS, DISHES, AND SHALLOW BOWLS

To return from the additional jar types, OK XIV–XVIII, to the original type forms of the Mycerinus corpus, we must examine the various bowl, dish, and cup forms, beginning with Type OK IX. In the Hetep-heres tomb there were thirteen dishes and bowls, of which four were round bottomed and nine flat bottomed. All had plain rims (Type IX a or X a). The four round-bottomed bowls of Type OK IX a included three small and not well-finished examples and one large, fine, shallow bowl.

629–639–684 (a, b)	broken but complete; wide, shallow dish with plain rim with line marked inside somewhat like the bent-sided bowls (Type IX c); height 10 cm.; maximum diameter 43 cm. Pl. 43 a 1/2, Fig. 145
1261	complete but chipped, with plain rim swelling on outside (slightly contracted); height 8·7 cm.; maximum diameter 21·4 cm. Fig. 145
1295	perfect, with plain, round-edged rim; height 6·7 cm.; maximum diameter 20·4 cm. Fig. 145
917	perfect with plain rim swelling outside (slightly contracted); height 5·75 cm.; maximum diameter 17·8 cm. Fig. 145

The other examples of Type OK IX from the Giza Cemetery are as follows:

Type OK IX a

Dynasty IV

G 1223 A	1 practical alabaster bowl; *Vol. I*, fig. 227 a; 2 models (*loc. cit.*)
G 4140 A	1 model: 13–11–4; *Vol. I*, fig. 279
G 4260	1 bowl; Junker, *Giza*, I, p. 110, fig. 10, no. 17
G 4340 A	4 models: 13–10–12 to 15; *Vol. I*, fig. 285
G 4160 A	2 models; *Giza*, I, p. 111, fig. 11, nos. 40, 42
G 4250 A	1 model; *Giza*, I, no. 39
G 4530 A	2 models: 14–1–57; *Vol. I*, fig. 297 b
G 4610 A	35 models: 15–11–47, 48, 56, 35–4–1; *Vol. I*, fig. 323
G 1201	1 model; *Vol. I*, fig. 218
G 1203 A	fragments of model; *Vol. I*, p. 391
G 7070 B	2 models: 29–10–6. See Fig. 145
G 7110	3 models: 24–12–203
G 7330 A	1 practical alabaster bowl: 34–6–14. See Pl. 45 l, Fig. 145
G 7650 C	2 models; 29–3–252, 253. See Fig. 145
G 7130 X (in mastaba G 7133)	3 models: 24–12–965, 25–1–126, 389
G 7440 Z (in mastaba G 7442)	4 models: 27–5–90 to 93
G 7650 A	1 model: 36–12–28

Dynasty V

G 4631 B	25 models: 14–1–40; *Vol. I*, fig. 304 c
G 4733 E	18 models: 14–2–40, 43
G 4811 B	67 models: 15–12–21, 35–11–68
G 2353 B	67 rough models (some of Type X a): 12–11–48
G 5480 A (formerly G 2340 A)	2 models: 33–2–192
G 6010 A	13 models: 25–11–117
G 6020 A	32 models: 25–12–33, 104
G 6040 B	5 models: 25–12–113, 116, 253
G 7524 C	13 models: 28–5–200, 201, 29–4–4, 33, 34, 35

Dynasty VI

G 2385 X	1 model: 35–12–42
G 5232 A	75 models: 14–11–195
G 2387 A (in mastaba G 2385)	45 models: 12–12–593

Type OK IX b: Bowls with internal rim

Dynasty IV

G 4640 A	practical bowl of alabaster: 13–12–6. See Fig. 145
G 7550 B	1 model: 28–5–179. See Fig. 145

Type OK IX c: Bent-sided bowls

Dynasty IV

G 4530 A	27 models: 14–1–51, 52, 56; *Vol. I*, fig. 297 b. See Fig. 145

Dynasty V

G 7631 B	1 fragmentary diorite example: 25–2–194. See Fig. 145

In Dynasty VI a practical example of Type IX a was found in the tomb of Queen Neith (G. Jéquier, *Les Pyramides des Reines Neit et Apouit*, p. 28, fig. 9). There were also three examples of plain rimmed bowls with open or closed spout, two in the tomb of Queen Neith (one a model; *loc. cit.*, p. 29, fig. 10; and *Annales du Service*, 34, 1934, p. 109, fig. 16), and one in the tomb of Wazet (M XII) (Jéquier, *Tombeaux de Particuliers*, p. 83, fig. 94).

TYPE OK X: FLAT-BOTTOMED CUPS, DISHES, AND BOWLS

The nine practical alabaster vessels in the tomb of Hetep-heres were all of Type X a with plain rim. They include three large bowls, five smaller bowls or dishes, and one small cup. The workmanship is good but not extraordinarily fine. The list is as follows:

581+600+601+622+623+675(22): broken and mended, nearly complete, with plain rim, swelling on outside (slightly contracted); height 15·3 cm., maximum diameter 45·2 cm., Pl. 43 a 1/1. See Fig. 146.

625: perfect, with plain rim swelling on outside (slightly contracted); height 12·4 cm., maximum diameter 40·6 cm. See Pl. 43 a, 2/1 and Fig. 146.

657+673(3)+674(14–16)+675(1–3, 29, 69, 113, 132)+682(28–29)+687(14, 21, 19)+700(6): broken and incomplete, with plain rim, swelling outside (slightly contracted); height 15·2 cm., maximum diameter 40 cm. See Pl. 43 2/2 and Fig. 146.

1094: perfect, with thin-edged plain rim; height 6·6 cm., maximum diameter 25 cm. See Fig. 146.

1037+1050(1): broken but complete, with plain rim; height 6·2 cm., maximum diameter 21·6 cm. See Fig. 146.

1044: complete but cracked, uneven quality of stone, plain rim; height 5·6 cm., maximum diameter 22 cm. See Fig. 146.

563: perfect, slightly irregular with plain rim, swelling on outside (slightly contracted); stained, contained wood and two mud models (563 a, b); height 6·6 cm., maximum diameter 19·4 cm. See Fig. 146.

775: irregular, rim chipped; slight boring marks inside not completely smoothed away; height 5·2 cm., maximum diameter 15·8 cm. See Fig. 146.

1153: perfect, with plain rim; height 3·2 cm., maximum diameter 8·2 cm. See Fig. 45.

As in the Hetep-heres group, the bowls of Type X form one of the most frequent types in the early mastabas of the Western Field. A number of practical vessels were recorded, but the models, of course, are the most numerous. They vary from shallow dishes to tall bowls, but the variations are difficult to distinguish, as was the case in Type IX. It should be noted that the subdivisions a and b have been reversed from the classification used in *Vol. I*, the spreading-sided cups and bowls now being called X b, in order that X a should include the same forms as IX a, differing only in having a flat instead of rounded base. Emphasis should be laid on the size and fine finish of the models of Type X b found in the four northern twin mastabas, and in particular in the comparatively large group of G 7210 B. The number recovered in this tomb was, however, very small in comparison with the numbers found in later mastabas. The figures must be taken as giving only a sketchy outline of the original equipment of these early mastabas of the Eastern Field.

Type OK X a: Dishes and bowls with plain rim

Dynasty IV

G 1223 A	1 fragment of a practical vessel; *Vol. I*, p. 400
G 1225 A	1 model; *Vol. I*, fig. 231
G 2100 A	2 models: 36–3–1; *Vol. I*, fig. 239
G 4000	4 practical vessels; Junker, *Giza*, I, p. 110, fig. 10, nos. 11, 13 to 16
G 4160 A	1 model; *loc. cit.*, fig. 11, no. 41
G 4150 A	1 model; *loc. cit.*, no. 37

G 4250 A	1 model; *loc. cit.*, no. 38
G 4140 A	2 models: 13–11–34, 8; *Vol. I*, fig. 279
G 4240 A	1 practical vessel: 13–11–59; *Vol. I*, fig. 282
G 4360 A	1 practical vessel; *Giza*, I, p. 110, fig. 10, no. 10
G 4460 A	1 practical vessel; *loc. cit.*, no. 12
G 4640 A	1 practical vessel: 13–12–8; *Vol. I*, fig. 291
G 4530 A	19 models: 14–1–54; *Vol. I*, fig. 297 b. See Fig. 147
G 4610 A	13 models: 15–11–46, 49; *Vol. I*, fig. 323
G 7350 A	5 models: 28–7–7, 28–8–3, 6, 11, 18
G 7440 Z	56 models: 27–5–29, 35 to 89

Dynasty V

G 4631 B	9 models: 14–1–42; *Vol. I*, fig. 304 b
G 4520 A	5 models: 14–4–4; *Vol. I*, fig. 310
G 4813 D	1 model: 15–11–80
G 5480 A (formerly G 2340 A)	4 models: 33–2–192
G 2370 A	1 practical bowl, diorite: 12–11–32. See Pl. 45 f
G 1309 A	1 model saucer
G 1208 B	41 model saucers: 35–5–9
G 6010 A	1 model: 25–11–117
G 6020 A	5 models: 25–12–232
G 6040 A	34 models: 25–12–254 to 259

Dynasty VI

G 5330 A	1 practical slate bowl with incised marks: 14–11–146. See Fig. 147
G 2430	14 models: 39–6–5

Type OK X b: Cups and bowls with spreading sides and plain rim

Dynasty IV

G 4160 A	3 models; Junker, *Giza*, I, p. 111, fig. 11, nos. 27, 28, 31
G 4150 A	2 models; *loc. cit.*, nos. 26, 34
G 4250 A	1 practical vessel and 3 models; *loc. cit.*, nos. 30, 32, 33, 29
G 4000, debris	4 models; *loc. cit.*, nos. 24, 25, 35, 36
G 4140 A	18 models: 13–11–2, 5, 9, 10, 21, 22; *Vol. I*, fig. 285
G 4340 A	1 practical vessel and 9 models: 13–10–10, 2, 8, 11; *Vol. I*, fig. 285
G 4610 A	19 models: 15–11–50, 35–4–1 c; *Vol. I*, fig. 323
G 4530 A	31 models: 14–1–53, 55, 62; *Vol. I*, fig. 297 b
G 2100 A	1 model: 36–1–2; *Vol. I*, fig. 239
G 2100, debris	1 model: 33–2–183
G 2120 A	1 model: 33–1–3; *Vol. I*, fig. 245
G 2150 A	8 models: 33–1–36; *Vol. I*, fig. 267
G 5080 B	16 models (1 limestone, 1 obsidian): 33–2–97, 104, 108, 150, 153
G 7110	4 models: 24–12–259, 1170, 1171, 25–1–29
G 7210 B	15 models: 25–1–518 to 522, 558 to 564
G 7410 B	2 models: 25–2–730, 27–1–7
G 7430 C	1 model: 27–2–219
G 7350 A	19 models: 28–8–1, 2, 4, 5, 7, 9–11, 13, 15–18, 20, 36; 29–10–1–4. See Fig. 147
G 7070 B	1 model: 29–10–10. See Fig. 147
G 7550 B	3 models: 28–5–180, 185, 187. See Fig. 147
G 7560 B	10 models: 36–12–24, 25
G 7130 X (in mastaba G 7133)	2 models: 24–12–966, 967
G 7440 Z (in mastaba G 7442)	4 models: 27–5–90 to 93

Dynasty V

G 4733 E	38 models: 14–2–37 to 39, 76, 77
G 4631 B	11 models: 14–1–41; *Vol. I*, fig. 304 b
G 4714 A	46 models: 15–12–28, 35–12–5
G 1208 B	4 models: 35–5–7
G 1151 A	49 models
G 6010 A	11 models: 25–11–117
G 6020 A	8 models: 25–12–31, 88, 89, 95–97, 99, 100
G 6040 B	2 models: 25–12–115, 117
G 2360 A	30 models (very rough and some probably X a): 12–11–9
G 2353 B	53 models: 12–11–48
G 7150 B	1 model: 26–1–866
G 7111 C–D	122 models: 25–1–440–441, 458, 465, 473, 475, 481, 495, 499, 500, 512, 516, 1128, 1234, 1238, 1250, 1258, 1272, 1276, 1278, 1283, 1285, 1292–1296
G 7710 A	43 models: 25–3–172, 178, 193, 207, 209, 217
G 7710 B	50 models: 25–2–1116, 1118, 1119, 1131, 1138, 1147
G 7132 A	61 models: 24–12–555, 1014, 1025, 1028, 1033, 1048
G 7753 A	69 models: 29–12–166
G 7754 B	52 models: 29–12–71, 72, 73, 91, 92, 93
G 7422 A	1 model: 25–1–1189
G 7524 C	3 models: 29–4–11, 30, 31

Dynasty VI

G 2385 A (in mastaba G 2374)	1 model: 12–12–108
G 2381 X	1 model: 12–12–187
G 2387 A (chief shaft in G 2385)	4 models; 12–12–586
G 7431 D	1 model alabaster saucer

Type OK X c: Bowls with internal rim

Dynasty IV

G 4340 A	1 practical vessel: 13–10–10; *Vol. I*, fig. 285
G 4640 A	1 practical vessel: 13–12–6; *Vol. I*, fig. 291
G 2120 A	2 practical vessels: 33–1–6 a, b; *Vol. I*, fig. 245
G 4160 A	1 practical vessel; *Giza*, I, p. 110, fig. 10, no. 18
G 4440 A	2 broken practical vessels: 13–11–97, 98; *Vol. I*, fig. 287
G 7550 B	8 models: 25–5–179
G 7130 A	1 fragmentary diorite example: 24–12–284. See Fig. 147

In the streets of Cemetery 7000 several other fragments were found:

24–11–423 (alabaster), 497 (alabaster), 564 (schist), 792 (alabaster), 970 (diorite).

Dynasty V

G 4813 A	fragments of practical diorite bowl: 15–11–62

Dynasty VI

G 2001 B, D	2 examples of diorite: 36–3–21, 23. See Fig. 147 and Pl. 45 d
G 2347 a B (G 5563 B)	1 diorite example: 35–11–37. See Fig. 147 and Pl. 45 j

Type OK X d: Flat tray with plain rim

Dynasty IV

G 7650 C	1 model: 29–3–255. See Fig. 147

Type OK X e: Bowl with turned-in sections of rim

Dynasties V–VI

G 1024	1 practical diorite bowl (University of California, Museum of Anthropology, no. 6–19784). See Fig. 147 and Pl. 45 a, b

Other examples of this type, some with only two turned-in portions of the rim forming a lipped spout, were found in the tomb of the wife of Pepy II, Queen Neith (Jéquier, *Les Pyramides des Reines Neit et Apouit*, p. 29, fig. 10; p. 30, fig. 11; and *Annales*, 34, 1934, p. 110, fig. 18). A model of a flat-bottomed cup with lipped mouth was also found in the tomb of Queen Neith (Jéquier, *loc. cit.*, p. 32, fig. 14).

TYPE OK XI. CUPS AND BOWLS WITH EXTERNAL RIM

Type OK XI b: Bowl with recurved rim

Dynasty VI

G 2385 A (in mastaba G 2374)	1 practical diorite example, inscribed with name of King Tety: 12–12–109. See Fig. 147; Pl. 45 c

Bowls with recurved rim, some with covered and some with open spout, were found in the Dynasty VI tomb of Queen Neith (Jéquier, *Les Pyramides des Reines Neit et Apouit*, pp. 28–31, fig. 9–13; and *Annales*, 34, 1934, pp. 107–112, figs. 14, 15, 17, 19).

Type OK XI c: Bowl with band-rim around contracted mouth

Dynasties V–VI

G 2024	1 practical diorite bowl. See Pl. 45 i

Quite similar to the example from G 2024 are the large models of bowls from the tomb of Wazet in the Pepy II cemetery of late Dynasty VI (Jéquier, *Tombeaux de Particuliers*, p. 83, fig. 94).

TYPE OK XII. CIRCULAR TABLE WITH ROUND STEM SUPPORT

The flat-topped circular table was introduced by Khasekhemuwy at the end of Dynasty III and is the form of table for holding bread represented on the slab stelae of the early mastabas of the Western Cemetery at Giza. It occurs in practical examples and in models all through the Old Kingdom. No example was found in the Hetep-heres tomb, but three practical examples were recorded in Cemetery G 4000.

Type OK XII b: Flat-topped circular table

Dynasty IV

G 4150 A	fragments of table; *Giza*, I, p. 110, fig. 10, no. 20
G 4440 A	fragments of table: 13–11–99; *Vol. I*, p. 477
G 4640 A	fragments of table: 13–12–34; *Vol. I*, p. 483
G 4530 A	1 model: 14–1–61; *Vol. I*, fig. 297 b. See Fig. 148
G 7350 A	1 incomplete example: 28–8–21
G 7550 B	practical table top without support: 28–5–186. See Fig. 148
G 5080 B	2 practical table tops: 33–2–99, 100
G 7440 Z (in G 7442)	1 model: 27–5–23

Dynasty V

G 4631 B	1 model: 14–1–44; *Vol. I*, fig. 304 c

TYPE OK XIII. BOWL STANDS AND JAR STANDS

The tall bowl stand (Type OK XIII a) was a large ceremonial stand used in temples. In the debris of the Eastern Field at Giza a few unmistakable fragments of such stands made of diorite and alabaster were recorded and these probably came from the Pyramid Temples. In the burial chambers of the early mastabas no example was recorded, although they appear in relief in the chapels, as in the case of that of Khufukhaf (G 7140) where tall stands are carved on each side of the false-door. In the early Dynasty V mastaba G 1452–1453 two inscribed stands were found in position in the chapel in front of the offering niche. Several other tall stands, as well as somewhat shorter ones, are known in the Cairo Museum from

Mariette's excavations at Saqqarah (L. Borchardt, *Denkmäler des Alten Reiches im Museum von Kairo*, 1937, nos. 1295–1301). These bear the names of private persons and indicate that the tall bowl stands were used like the pottery stand in the mastaba chapels of Dynasties V and VI.

The low jar stand (ring stand, Type XIII b) appears principally as an adjunct to jars of Types XIV, XV, and XVI in the Hetep-heres tomb, as well as in the examples from the early mastabas listed above. Junker found three examples not joined to jars in Cemetery 4000 (*Giza*, I, p. 111, fig. 11, nos. 21 to 23).

It is clear from the above list of vessels that once the use of models was firmly established the deposition of practical vessels in the Giza burial chambers decreased rapidly. The types used did not alter greatly from Dynasty IV to Dynasty VI, although some of the more elaborate forms were simplified. The stone vessels, as represented by the practical vessels and models, show a new archaeological group. As Reisner stated in *Naga-ed-Dêr*, III, the vessels of the Old Kingdom show a new set of types which were designated OK i–xi. The old corpus is represented at Giza particularly by jars of Types I and V and by bowls of Types IX and X, but the types which give the group its characteristic appearance are the necked jars of Types XIV, XV, and XVI. The examples of these types found in Upper Egypt are practical, finely worked vessels, although most of them are of small size. They were obviously used for perfumed ointments and similar cosmetics, and their small size was probably due to the cost of these cosmetics. In the Hetep-heres tomb, the small jars of Types I e and XIV b were certainly used for costly substances of the same sort. The large jars of Type I d were certainly also filled with oils and ointments. A doubt arises regarding the use of the other large jars of Types XV and XVI, especially as one of them had a spout, but even a jar with a spout could have been used for an oil such as olive oil. It can be assumed, therefore, that all the vessels in the Hetep-heres tomb were used for oils and cosmetics. As the succeeding groups of vessels and models present the same or nearly the same series of forms, it may be concluded that even the models represent again, symbolically, oils, perfumed ointments, and other cosmetics such as eye-paint. It may be noted in passing that the remains found in the small jars of Type I e in the Hetep-heres tomb and examined by Mr. Lucas indicated that the perfumed ointment had been made by rubbing aromatic parts of plants with oil or grease.

A few types of jars, known at Giza only in models, have a different use. Type V extra represents, as Junker has already pointed out, the old wine jar with its sides strengthened by a cord net drawn around the body. This is in origin a pottery jar, although examples have been found in Dynasties I to III made of alabaster with the cord net carved in relief. There was also one alabaster model imitating the two-handled oil jar of foreign ware found so frequently in the Giza Necropolis.

The basins, bowls, and dishes appear to represent the table vessels of an earlier period made of stone. It is to be noted that one set of models found in G 5480 A (formerly G 2340 A) had labels written in ink on the bottom. The set consisted of one cylindrical jar and six bowls of Type IX a and X a (Register Nos. 33-2-191, 192). Unfortunately, we could not make out the written signs. Each inscription appears to have consisted of a sign or a group of signs and a number. It is probable that the signs indicate the supposed contents of the bowls and the jar. It is to be noted that the alabaster ointment tablets often found in association with models have seven round holes (representing bowls or jars), each of which is inscribed with the name of one of the seven traditional ointments. One cylinder jar from G 2089 A (No. 38-4-32; see Pl. 45 h; Fig. 136) also had an ink inscription, but in this case it gave the name and titles of the owner: *śḥḏ ḫnty-š pr ꜥꜣ Nfr-ḳd*.

In conclusion, the variations in vessels and models depend largely on the means at the disposal of the owner of the tomb. It is impossible to lay down a fixed basis by which individual groups could be dated. The tomb groups of Dynasty IV contained more practical vessels and larger, better worked models. Those of Dynasty V present smaller models with a considerable increase in the use of limestone. The tomb groups of Dynasty VI appear to show a decrease in the use of models. Thus the evidence afforded by the stone vessels and models can only be used as corroborative evidence in estimating the date of the individual tombs.

INDEX

INDEX

Abdessalam M. Hussein: pp. 1, 2.
Abu Roash: p. 8.
Abusir: p. 64.
Abydos: pp. 19, 64.
Ahmed Youssef Moustafa: pp. 26, 37, 41.
Akhet-Mehu (G 2375): pp. 53, 54.
Alabaster: chips from coffin, pp. 16, 21.
  Sarcophagus, pp. 1, 15, 16, 21, 59.
  Vessels, pp. 20, 21, 34, 35, 38, 42, 90–102.
Albright, W. F.: p. 64.
Amenemhat I: p. 5.
Ankhetef: p. 11.
Ankh-haf (G 7510): pp. 8–12, 92.
Ankh-ir-s (G 4630–4631): p. 52.
Ankhmara, Prince: p. 11.
Ankhmara (G 7837): p. 14.
Annals, Old Kingdom: pp. 1, 6, 12.
Anubis: pp. 50–53, 55, 58.
Atet (Medum): pp. 3, 12.
Ay: pp. 64, 73.

Ba-ba-f (G 5230): p. 11.
Bases, Canopy: p. 14.
Basket: p. 21.
Baw-f-ra: p. 7.
Beadwork: pp. 40–42.
Bed: pp. 17, 32, 33.
Belt: pp. 40, 41.
Blocking: pp. 13, 14, 21.
Bone Tools: pp. 20, 34.
Bones, Bull: p. 13.
Bonnet, H.: p. 64.
Borchardt, L.: pp. 10, 19, 26, 31, 40, 41, 56, 59, 102.
Box: bracelet, pp. 19, 20, 43, 44.
  Curtain, pp. 16, 23–27.
  Inlaid, pp. 17–19, 36–40.
  Ointment jars, p. 42.
  Pottery, p. 60.
Bracelets: pp. 17, 19, 20, 29, 39, 43–45.
Braidwood, R.: pp. 64, 73.
Brunton, G.: pp. 41, 74.
Bull Bones: p. 13.
Buto: pp. 4, 5, 27.
Butterflies: pp. 19, 44.
Byblos: p. 75.

Canopic Chest: pp. 16, 21, 22, 48, 50, 53–55.
Canopic Jars: pp. 50, 54.
Canopy: pp. 14–16, 21, 23–25.
Carnelian: pp. 39, 44, 46.
Carrying-chair: pp. 12, 17, 18, 33, 34.
Case, for Staves: pp. 17, 18, 45–47.
Cattle Count: pp. 1, 8.
Cedar Oil: p. 75.
Černy, J.: p. 6.
Chair: Carrying, pp. 12, 17, 18, 33, 34.
  Gold-cased, pp. 16, 28, 29.
  Inlaid, pp. 17–19, 29–32.
Charcoal: p. 13.
Cheops: pp. 1–12, 19, 21, 22, 29, 39, 48, 50, 59, 62–102 *passim.*
Chephren: pp. 2, 6–12, 31, 50, 52, 53, 59, 62–102 *passim.*
Chest, Inlaid: pp. 17, 18, 19, 36–40.
Cilicia: pp. 73, 75.
Cloth: pp. 16, 20.
Coffin: pp. 1, 15, 16, 21, 59.
Copper: fittings, pp. 14, 19, 23–25, 28.
  Implements, pp. 20, 21, 34, 35, 43, 45.
  Vessels, pp. 20, 42.
Crystal Eyes: p. 39.
Curtain Box: pp. 16, 23–27.

Dahshur: pp. 1–5, 9, 11, 12, 14, 15, 17, 21, 59, 60.
Dates: pp. 1, 2, 8, 9, 12.
Davies, Nina M.: p. 31.
Decree, Pepy I: p. 1.
Dedef-hor (G 7210–7220): pp. 5, 7–11.
Dedef-ra: pp. 5–8, 10–12.
Dedi: p. 7.
Deir-el-Ballas: p. 61.
Derry, Douglas: p. 10.
Der-semat: p. 92.
Diorite: pp. 94, 101.
Disks, Metal: pp. 17, 18, 45–47.
Drioton, E.: pp. 41, 58.
Duell, P.: p. 14.
Dunand, M.: p. 75.
Dunham, D.: pp. 21, 23, 33.
Duwanera (G 5110): p. 11.

Electrum: pp. 17, 18, 46.
Embalming: pp. 48, 49, 59.
Emery, W. B.: pp. 14, 46, 64.
Engberg, R.: pp. 64, 75.
Ewer and Basin: pp. 20, 42, 95.

Faïence Inlays: pp. 12, 17–19, 25–27, 29–32, 36–40.
Fakhry, Ahmed: p. 3.
Fefy: p. 92.
Field of Offerings: p. 4.
Firth, C. M.: pp. 14, 15, 56.
Flint Blades: pp. 21, 45.
Flower Patterns: pp. 17–19, 28–32, 38, 39.
Forbes, R. J.: p. 44.
Foreign Pottery: pp. 62–65, 73–76.
Foreign Seal Impression: pp. 75, 76.
Frankfort, H.: p. 75.
Fungus: p. 20.
Gardiner, Sir Alan: p. 1.
Garment, Bead: pp. 41, 42.
Gerte, J.: pp. 23, 25, 33.
Gold: casing, pp. 23–47.
  Hieroglyphs, p. 33.
  Implements, p. 45.
  Vessels, pp. 19, 21, 43, 45.
Granaries, Model: p. 89.
Granite, Black: p. 94.
Grdseloff, B.: pp. 6, 12, 15, 49, 58.
Grinsell, L.: p. 23.
Guy, P. L. O.: p. 64.

Hama: p. 75.
Hamamat: pp. 54, 55.
Hamann, R.: p. 31.
Hassan, Selim: pp. 58, 64, 74, 92.
Hathor: p. 54.
Hawk Patterns: pp. 12, 18, 19, 25, 29–31.
Headrest: pp. 42, 43.
Heliopolis: p. 4.
Hemaka: p. 46.
Hemiunu (G 4000): pp. 8–10, 59.
Henutsen, Queen: pp. 3, 6–8.
Hesy-ra: pp. 14, 15, 19, 43, 45.
Hetep-heres I: *passim.*
Hetep-heres II: pp. 6–8, 11, 53.
Hetep-heres (G 7510): p. 11.
Hierakonpolis: p. 27.
Hor-baf: pp. 10, 11.
Hornblende: p. 95.
Horus: pp. 12, 18, 19, 25, 27, 29–31, 39, 40, 48, 50–54, 56.
Huni: pp. 2–4, 7, 9, 12.

ibw: pp. 15, 49, 58.
Idu (G 7102): p. 58.
Imhotep: p. 12.
Impy (G 2381 A): 54, 55, 60, 62, 63, 77.
Ingholt, H.: p. 75.
Inlays: pp. 12, 17–19, 25–27, 29–32, 36–40.
Inscriptions: pp. 4–6, 8, 10, 17, 23, 25–27, 33, 36, 38, 39, 43, 46, 48–59, 70, 75, 87, 93–96, 101, 102.
Isesy: pp. 49, 53, 57, 75.
Isis Temple: pp. 3, 10.
Isy: p. 52.
Ivory: pp. 43–45.
Iyemery (G 6020): p. 15.
Iyenefer: pp. 3, 17.

Jéquier, G.: pp. 52, 55, 74, 94, 96–99, 101.
Jericho: p. 64.
Junker, H.: pp. 8, 41, 48–52, 55–59, 74–102 *passim.*

KAGEMNI: p. 8.
KA-MENY: p. 92.
KANOFER (DAHSHUR): p. 9.
KA-NI-NESUT: p. 92.
KANTOR, HELENE: p. 64.
KA-PU-PTAH: p. 92.
KA-WAB (G 7110–7120): pp. 3, 5–9, 53.
KAY: p. 92.
KEES, H.: p. 51.
KEIMER, L.: pp. 31, 44.
KENEH: pp. 61, 67.
KHA-MERER-NEBTY: pp. 9, 92.
KHASEKHEMUWY: pp. 75, 87, 90, 101.
KHEMTEN (G 5210): p. 11.
KHENTET-N-KA: p. 7.
KHENT-KA (G 2130): p. 50.
KHENT-KAW-S: p. 12.
KHIRBET KERAK: p. 64.
KHNUMENTY (G 2374): p. 53.
KHUFU-ANKH (G 4520): pp. 52, 55, 56, 58.
KHUFU-KHAF (G 7130–7140): pp. 5–8, 10, 11, 17, 101.

LAPIS LAZULI: p. 44.
LAUER, J.-P.: pp. 4, 64.
LEATHER CASE: pp. 17, 18, 45–47.
LEPSIUS, C. R.: p. 15.
LIMESTONE: blocking, pp. 13, 14, 21.
  Canopy bases, p. 14.
  Vessels, pp. 92–102 *passim.*
LINEN: pp. 16, 20.
LION LEGS: pp. 16, 28, 32.
LISHT: pp. 4, 5.
LUCAS, A.: pp. 20, 21, 22, 24, 44, 102.
LÜDDECKENS, E.: pp. 49, 58.

MACRAMALLAH, R.: pp. 64, 65.
MAGICAL SET: pp. 92–102 *passim.*
MAISLER, B.: p. 64.
MARIETTE, A.: pp. 6, 7, 51, 58, 102.
MARQUET-KRAUS, J.: p. 64.
MASONRY BLOCKING: pp. 13, 14, 21.
MATMAR: p. 74.
MAT: hangings, p. 15.
  Patterns, pp. 12, 24, 25, 29–31, 33, 37, 43.
  Reed, p. 130.
MEDUM: pp. 1–3, 5, 6, 9, 12, 17, 31, 64.
MEDUW-NEFER (G 4630): p. 52.
MEGIDDO: pp. 64, 75.
MEIR: pp. 15, 49.
MELNIKOFF, N.: p. 41.
MEMPHIS: pp. 58, 59.
MENES: p. 90.
MERERUKA: p. 14.
MERESANKH I: pp. 6, 7.
MERESANKH II (G 7410–7420): pp. 7, 10, 11.
MERESANKH III (G 7530–7540): pp. 5, 7, 8, 11, 14, 34, 41, 42, 48.
MERNERA: p. 53.
MER-PTAH-ANKH-MERY-RA: pp. 54, 55.
MERYTYETES, QUEEN: pp. 6, 7, 8.
METHEN: p. 17.
MIN: pp. 17–19, 31, 38–40, 45–47.
MIN-KHAF (G 7430–7440): pp. 8, 9, 11.
MIN-YUWEN, PRINCE: p. 11.
MODEL VESSELS: pp. 20, 34, 60–102 *passim.*
MORTUARY WORKSHOP: pp. 14, 21, 22, 48, 59, 68.
MOSS, R.: p. 59.
MUD MODEL JARS: pp. 20, 34.
MUD SEALINGS: pp. 14, 22, 48–59, 68.
MURRAY, M. A.: p. 31.
MYCERINUS: pp. 11, 12, 19, 31, 40, 41, 49–53, 55, 57, 59, 60–102 *passim.*

NAGA-ED-DÊR: pp. 31, 70, 84, 86, 88, 90, 96, 102.
NEBEMAKHET: pp. 11, 14.
NEB-KA: p. 7.
NEBTY-TP-ITF-S: p. 10.
NEFER-F-RA: p. 53.
NEFER-HETEP-S: p. 12.
NEFER-HETEP-S (G 4714): p. 52.
NEFERIRKARA: pp. 19, 39, 40, 56, 62–102 *passim.*
NEFERMAAT (MEDUM): pp. 3, 9, 12.
NEFERMAAT (G 7060): pp. 8, 11.
NEFER-NESUT (G 4970): p. 59.
NEFERT-KAW (G 7050): p. 11.
NEFERT-KAW (G 7130–7140): p. 11.
NEFERT-NESUT (G 1457): p. 50.
NEITH PATTERNS: pp. 12, 19, 29–31.
NEITH, QUEEN: pp. 92, 96–99, 101.
NEKAURA, PRINCE: p. 11.
NEKHBET: pp. 26, 27, 39.
NEKHEBU (G 2381): pp. 54, 55, 62.
NEN-SEZER-KA (G 4631): p. 52.
NE-USER-RA: pp. 49, 52, 53, 56.
NEWBERRY, P.: p. 54.
Nfr-ḳd: pp. 93, 102.
NOFRET: pp. 12, 17, 31.
NY-ANKH-RA: p. 92.
NY-ANKH-SEKHEMET: pp. 56, 58.
NY-MA'AT-HAP (G 4712): p. 52.

OINTMENT JARS: pp. 42, 93, 96, 102.

PAINTED POTTERY: p. 64.
PAINTING: p. 12.
PALERMO STONE: pp. 1, 6.
PALESTINE: pp. 63–65, 73, 75.
PALM CAPITALS: pp. 17, 18, 29–31, 34, 46.
PAPYRUS: patterns, pp. 12, 17, 28.
  Prisse, p. 2.
  Turin, pp. 1, 5.
  Westcar, pp. 7, 10.
PATTERNS: pp. 12, 17–19, 24–27, 29–32, 36–42.
PEPY I: p. 59.
PEPY II: pp. 1, 53–55, 60, 63, 74, 75, 94, 96–98, 101.
PEPY-ANKH (MEIR): p. 15.
PETRIE, F.: p. 64.
PLASTER: pp. 21, 25, 30, 60.
POLES, CANOPY: pp. 14, 24, 25.
PORTER, B.: p. 59.
POTTERY: pp. 13, 14, 19, 20–22, 42, 60–89.
PRISSE PAPYRUS: p. 2.
PTAH-HOTEP (GIZA): p. 92.
PTAH-SHEPSES: p. 41.
PURIFICATION TENT: pp. 15, 59.
PYRAMID: Cheops, pp. 9, 59.
  Dahshur, Bent, pp. 1–3.
  Dahshur, North, pp. 1, 2, 59.
  Medum, pp. 1–3, 9.
  Mycerinus, p. 23.
  Queen's (G I–a), pp. 2–7, 13, 21.
  Queen's (G I–b), pp. 3, 4, 7.
  Queen's (G I–c), pp. 3, 5.
  Step, pp. 12, 64, 90.
  Texts, pp. 12, 57, 75.

QA'AR (G 7101): pp. 58, 69.
QUARRY MARKS: pp. 1, 8, 9.
QUEEN: gold leaf figure, pp. 12, 16, 17, 29.
  Pyramid, pp. 2–7, 13, 21.
  Reliefs, pp. 4–6.
  Titles: pp. 4, 6, 17, 33, 39, 43, 46.
QUIBELL, J. E.: pp. 14, 42, 45, 64.

RA: p. 56.
RAHOTEP (MEDUM): pp. 12, 17.
RAS SHAMRA: p. 75.
RAZORS: pp. 19–21, 43, 45.
REED MAT: p. 13.
RELIEFS: pp. 3–5, 11, 29, 39.
RESIN: p. 75.
RICE, B.: p. 23.
RICKE, H.: pp. 49, 58.
RINGS, SILVER: pp. 17, 19, 39, 43–45.
ROUGÉ, E. de: p. 6.

SAHURA: pp. 12, 19, 26, 41, 52, 56.
SAIS: p. 31.
SANDSTONE: p. 21.
SAQQARA TOMBS, DYN. I: pp. 14, 15, 46, 64.
SARCOPHAGUS: pp. 1, 15, 16, 21, 59.
SCHAEFFER, C.: pp. 64, 75.
SCULPTURE: pp. 10, 12.
SEAL-IMPRESSIONS: pp. 14, 22, 48–59, 68, 75, 76.
SEKHEM-KA-RA, PRINCE: p. 12.
SEMERKHET: p. 64.
SENEZEM-IB MEHY (G 2378): pp. 53, 56–57, 75.
SENEZEM-IB YENTY (G 2370): pp. 53, 56–58, 75.
SESHAT-SEKHENTIU (G 2120): p. 8.
SESHEM-NOFER (G 5080): pp. 51, 55.
SESHEM-NOFER III (G 5170): p. 41.
SETHE, K.: pp. 55, 57.
sḥ: pp. 15, 58.
SHEPSESKAF: pp. 11, 51, 55.
SHIPTON, G. M.: p. 75.
SILVER: pp. 13, 17, 18, 24, 39, 42–46, 52.

Skull, Bull: p. 13.
Sledge: p. 21.
Smith, J. L.: p. 41.
šn Sign: pp. 18, 19, 25, 39, 40.
Sneferu: pp. 1–9, 11, 12, 17, 19, 23, 25–27, 29, 39, 48, 56.
Sneferu-khaf (G 7070): p. 11.
Sphinx: p. 59.
Stairway: p. 13.
Statuette, Khufu-khaf: p. 10.
Staves: pp. 18, 45–47.
Steindorff, G.: p. 51.
Stewart, W. A.: pp. 23, 25, 28, 32, 43.
Stone Vessels: pp. 19, 20, 34, 35, 38, 42, 90–102 *passim*.
Sun: disk, pp. 27, 39.
  Temple, p. 56.
Syria: pp. 62, 64, 65, 73, 75.

Tarkhan: p. 64.
Tarsus: pp. 73, 75.
Tell Djamid: p. 75.
Tell el Judeideh: pp. 64, 75.
Tell Mak: p. 75.
Temple: pp. 2–5, 12, 56–60.
Tent: pp. 15, 58, 59.
Tety: pp. 5, 53, 54, 101.
Thompson, Marion: p. 33.
Ti: p. 52.
Titles: pp. 2, 4–8, 10, 17, 23, 25, 33, 39, 43, 46, 48–59.
Toilet Articles: pp. 42, 45.
Tools: bone, pp. 20, 34, 35.
  Copper, pp. 20, 21, 34, 35.
Tufl: p. 61.
Turin Papyrus: pp. 1, 5.
Turquoise: p. 44.

Unas: pp. 15, 53, 54, 57, 75.
Uza-ha-Tety: p. 5.

Valley Temple: pp. 2, 3, 57–60.

wꜥbt: pp. 48–50, 58, 68.
Walking-sticks: pp. 18, 45–47.
Wash-ptah: p. 92.
Wazet: pp. 26, 27.
Wazet (South Saqqara): pp. 96, 97, 99, 101.
Wedymu: p. 64.
Weill, R.: p. 12.
Weserkaf: pp. 4, 12, 51, 52, 56.
Westcar Papyrus: pp. 7, 10.
Williams, C. R.: p. 7.
Wilson, J. A.: pp. 56, 58.
Wine Jars: pp. 13, 62.
Wood: pp. 32–34, 45, 50, 53, 54.

Zaty (G 5370): p. 51.
Zaza-m-ankh: p. 7.
Zer: p. 90.
Zoser: pp. 7, 14, 15, 19, 90, 91, 95.

FIGURES

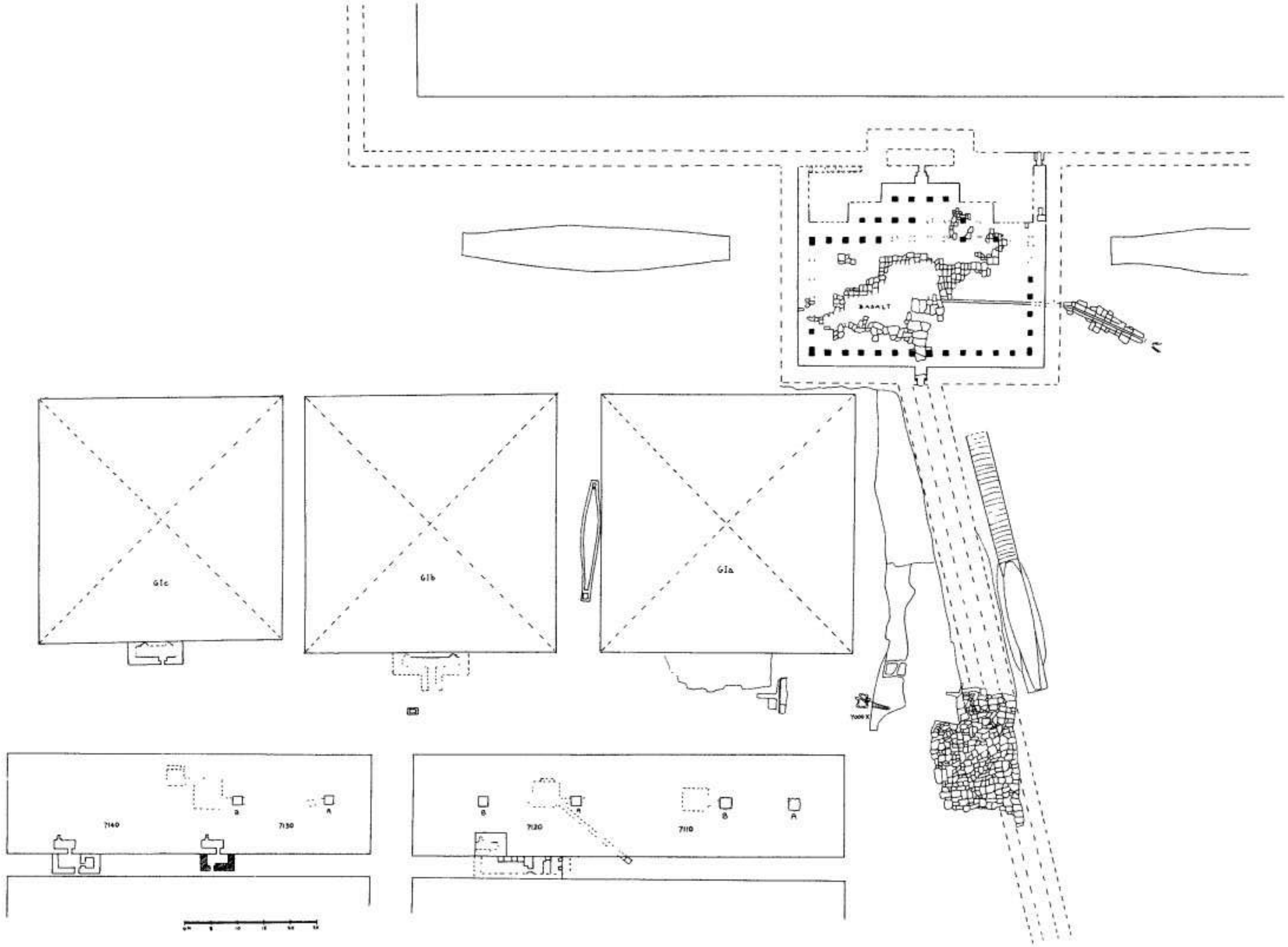

BASALT
G1c
G1b
G1a
7000 X
B
A
7140
7130
B
A
B
A
7120
7110

Fig. 1

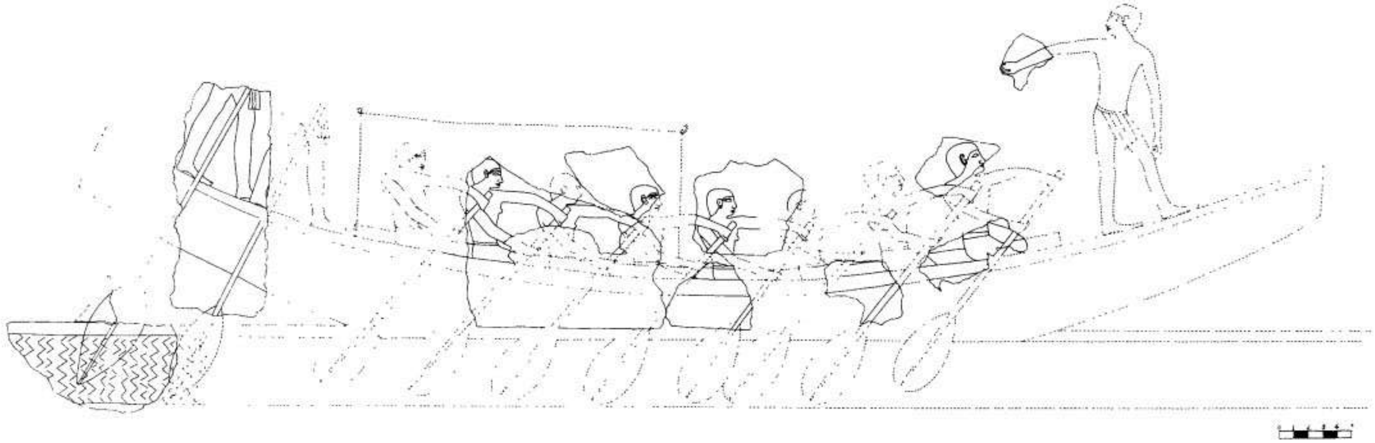


Fig. 2

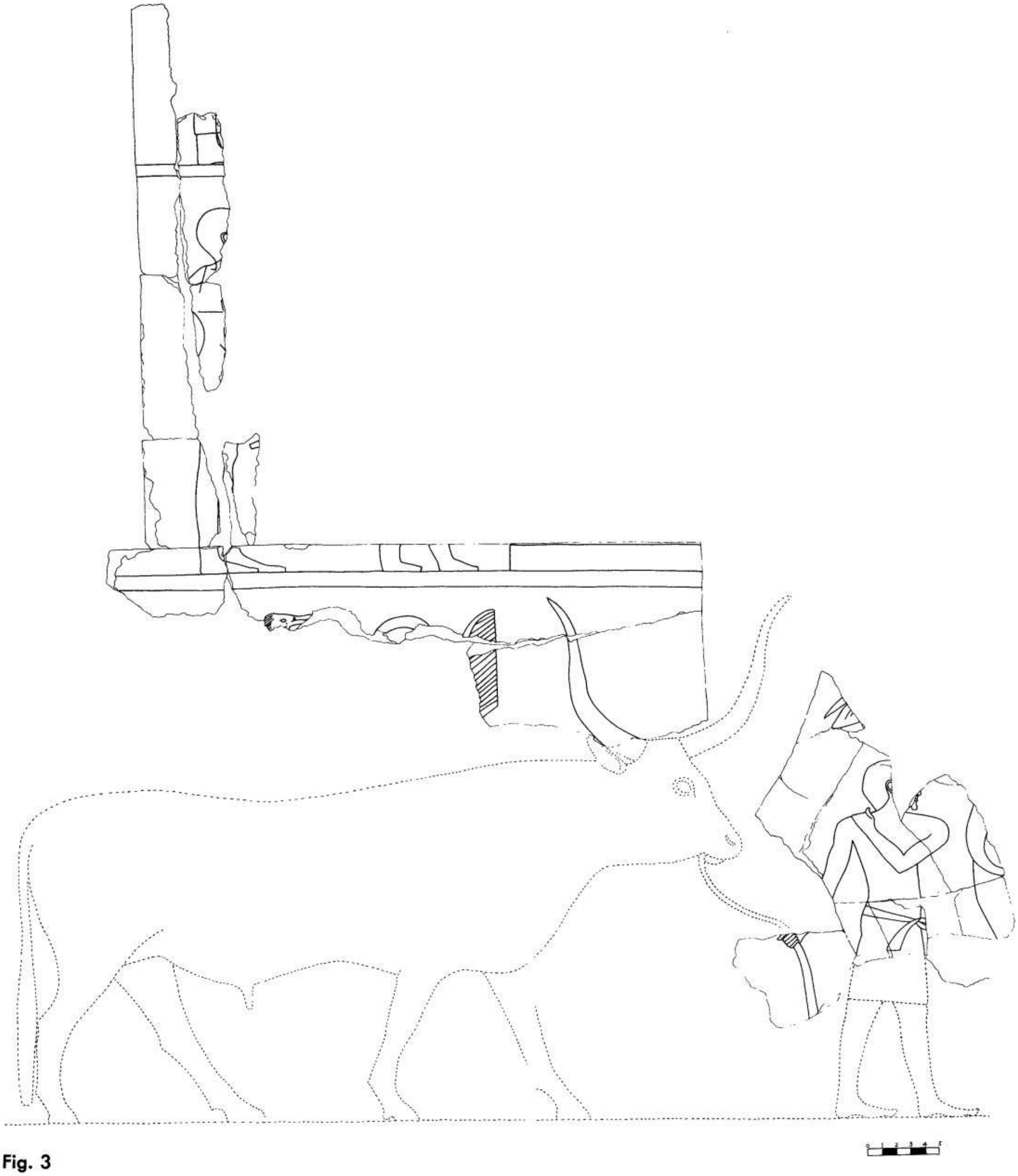


Fig. 3

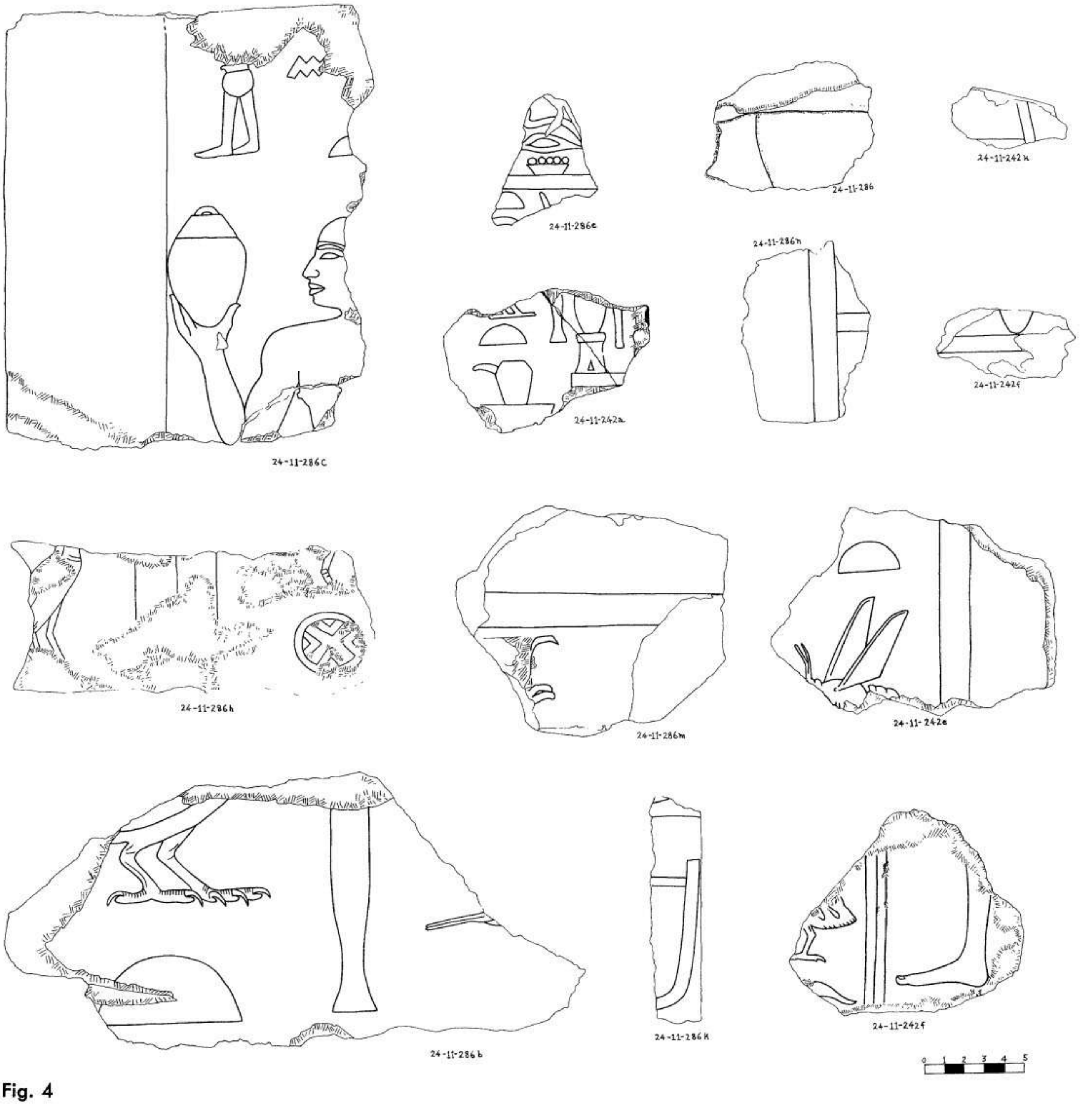
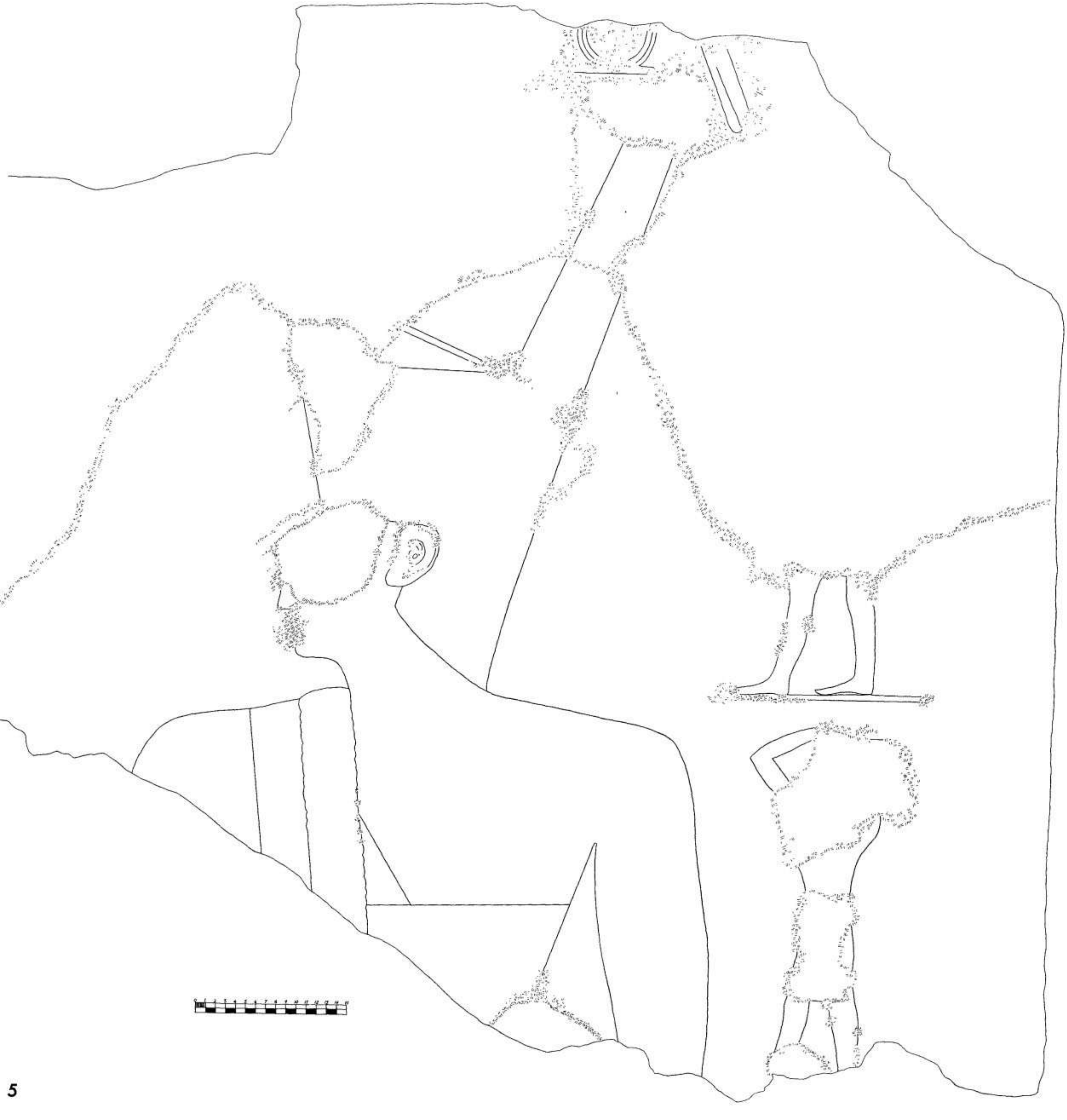

24-11-286C
24-11-286e
24-11-286
24-11-242k
24-11-286n
24-11-242a
24-11-242f
24-11-286h
24-11-286m
24-11-242e
24-11-286b
24-11-286K
24-11-242f
0 1 2 3 4 5

Fig. 4



5

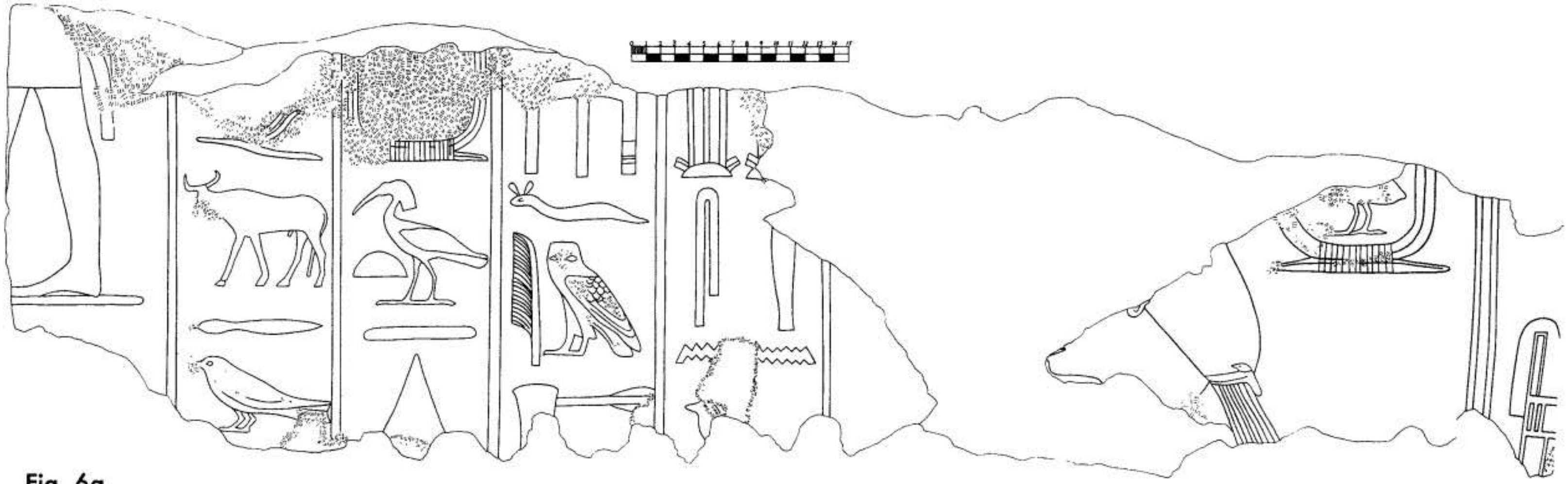


Fig. 6a

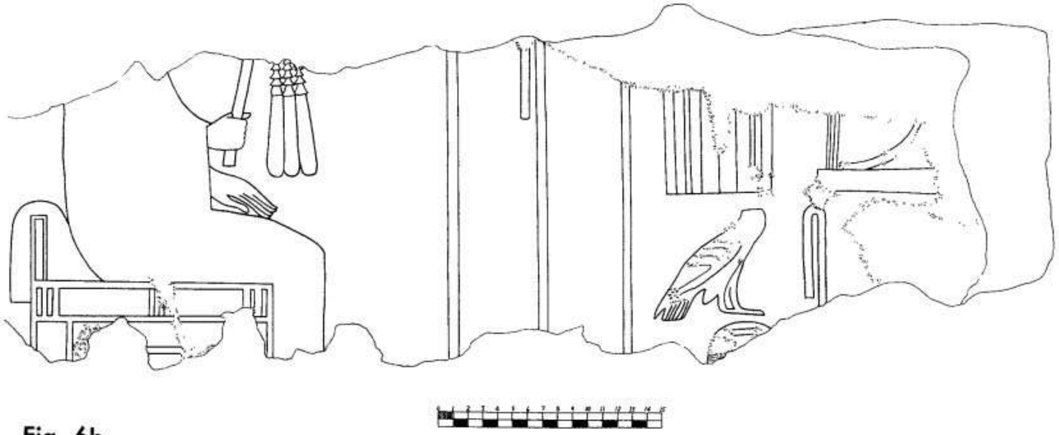


Fig. 6b

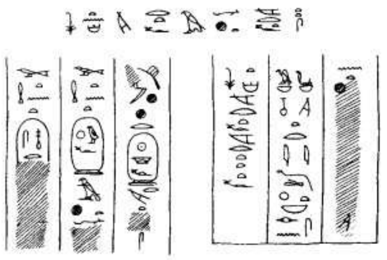


Fig. 8a

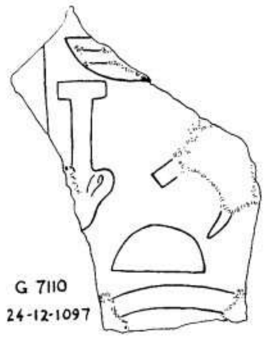

G 7110
24-12-1097

Fig. 8b

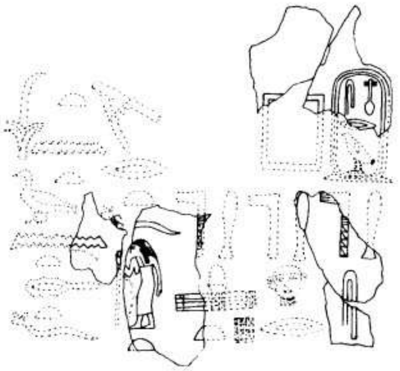


Fig. 10

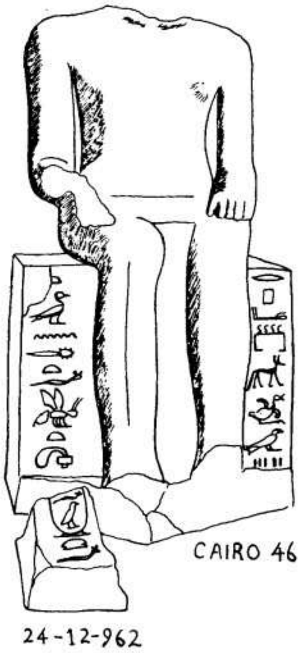

CAIRO 46
24-12-962

Fig. 11

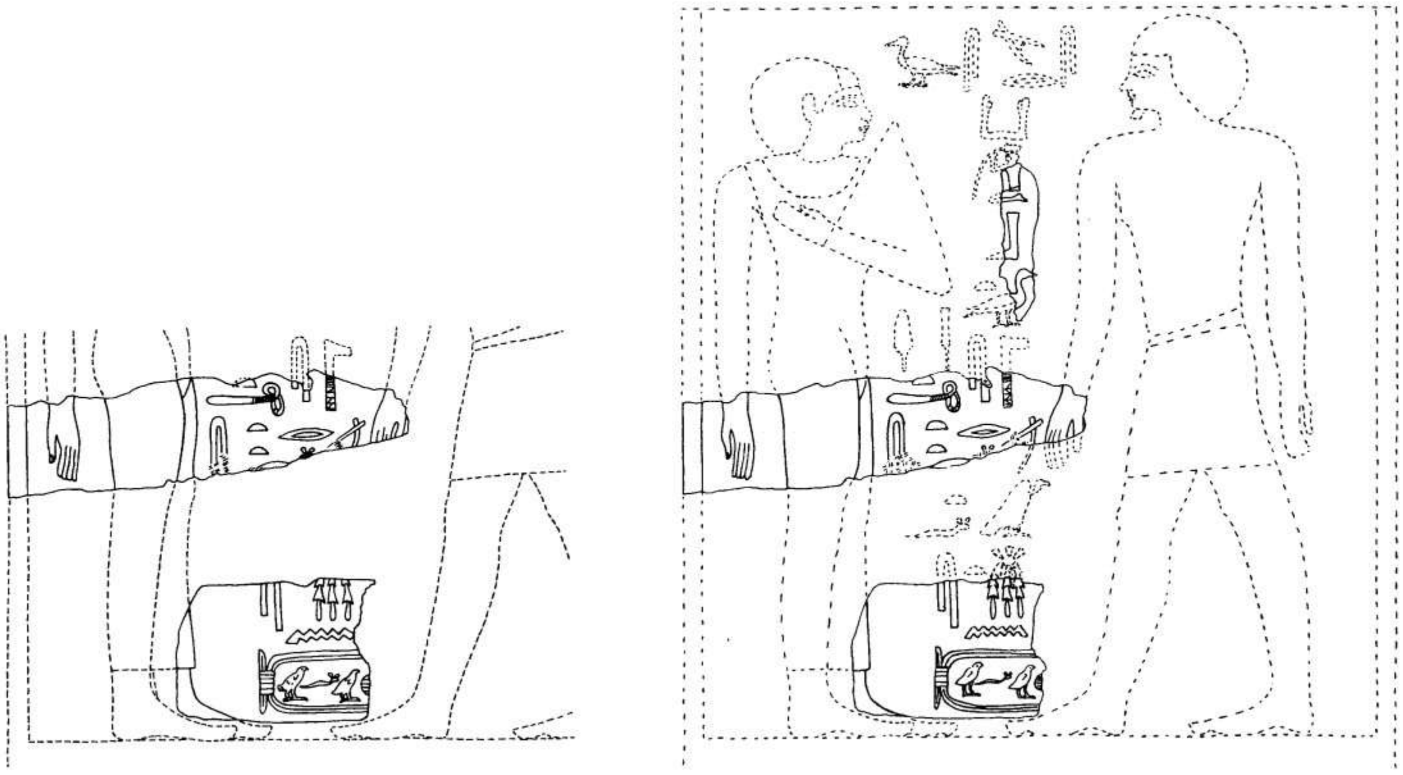
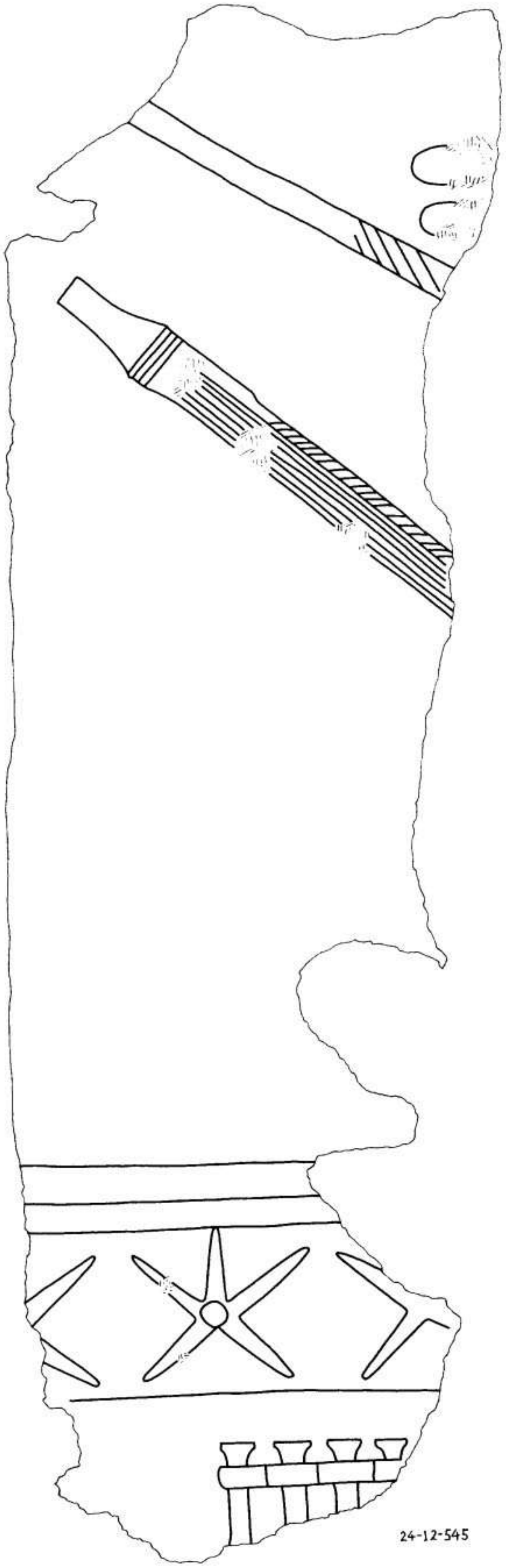
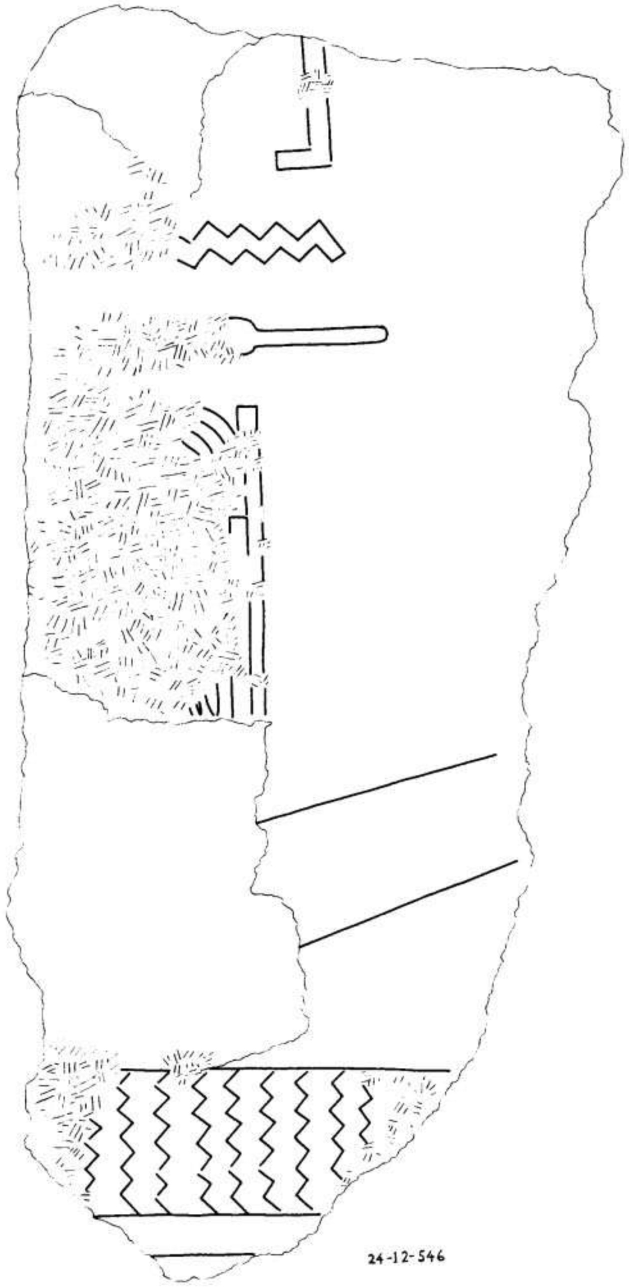


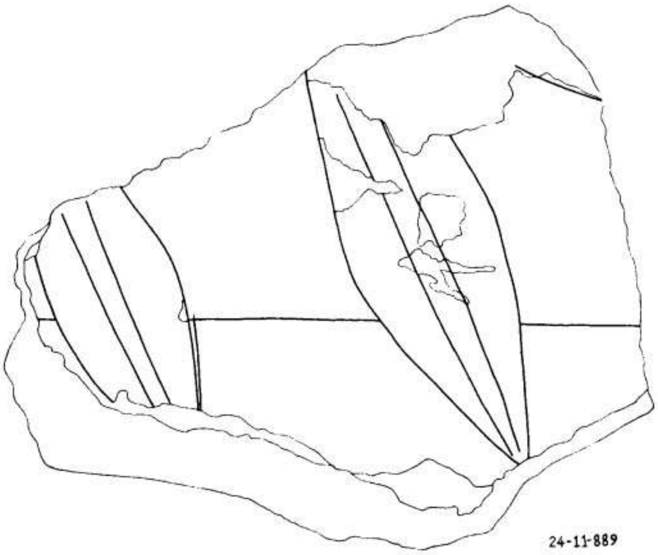
Fig. 9



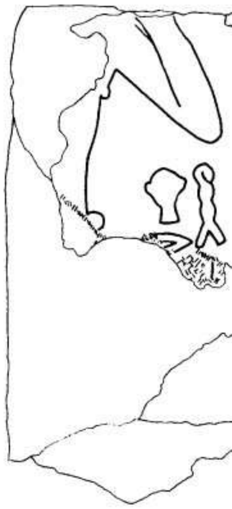
24-12-545

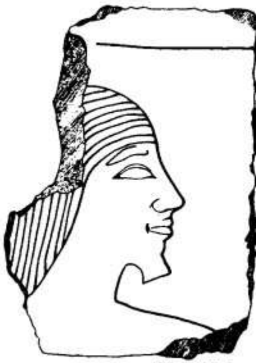


24-12-546

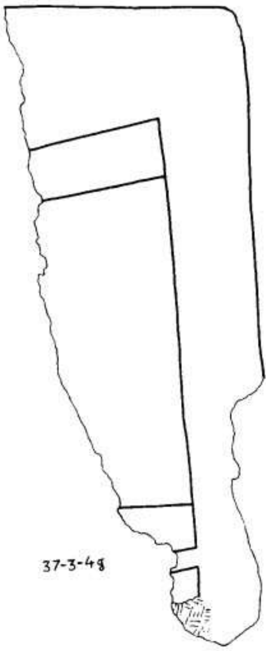


24-11-889

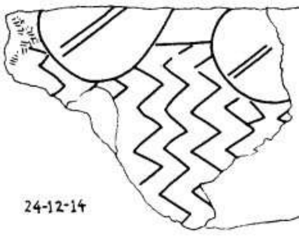




24-11-473

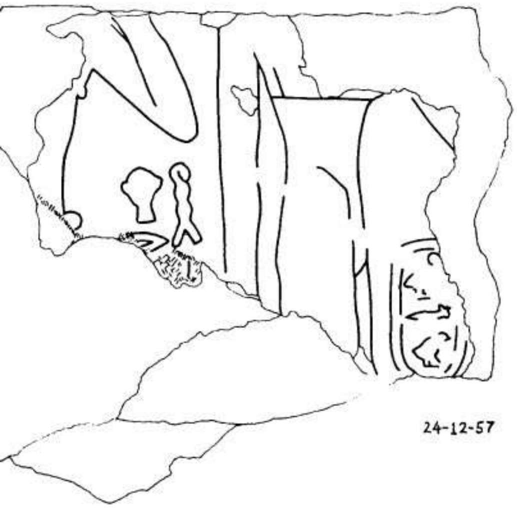


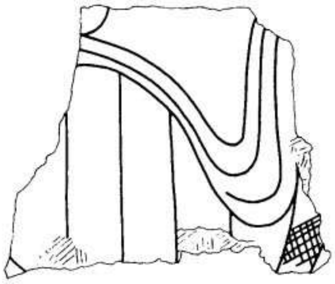
37-3-48

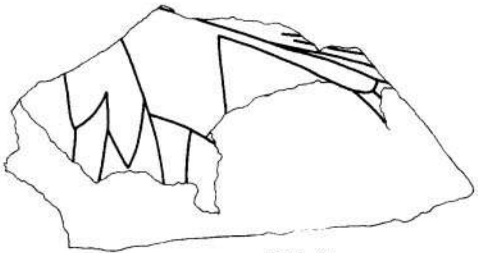


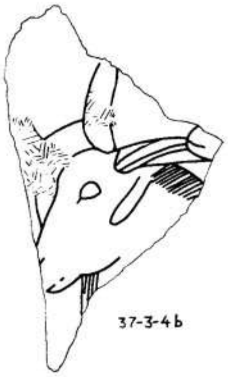
24-12-14

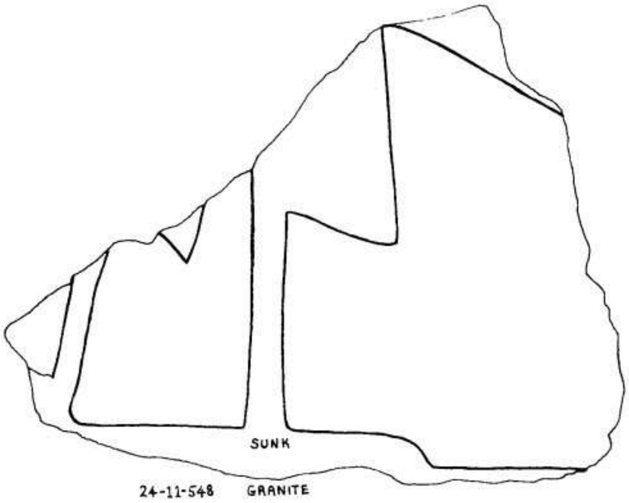
Fig. 7


24-12-57

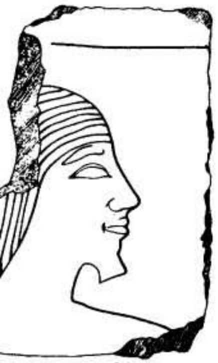

37-3-4c

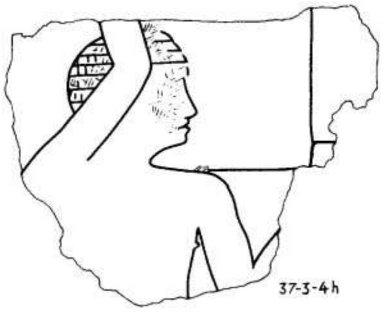

37-3-4d

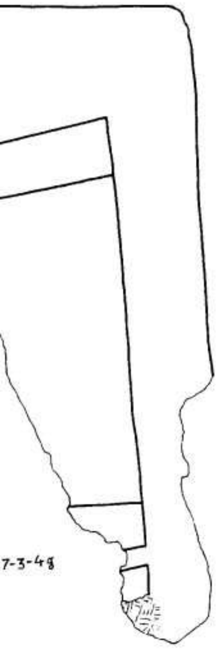

37-3-4b

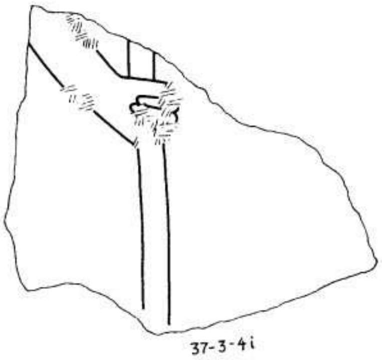


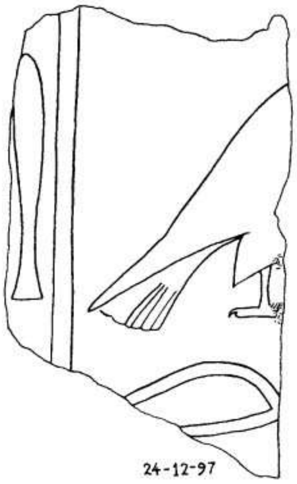
24-11-548 GRANITE

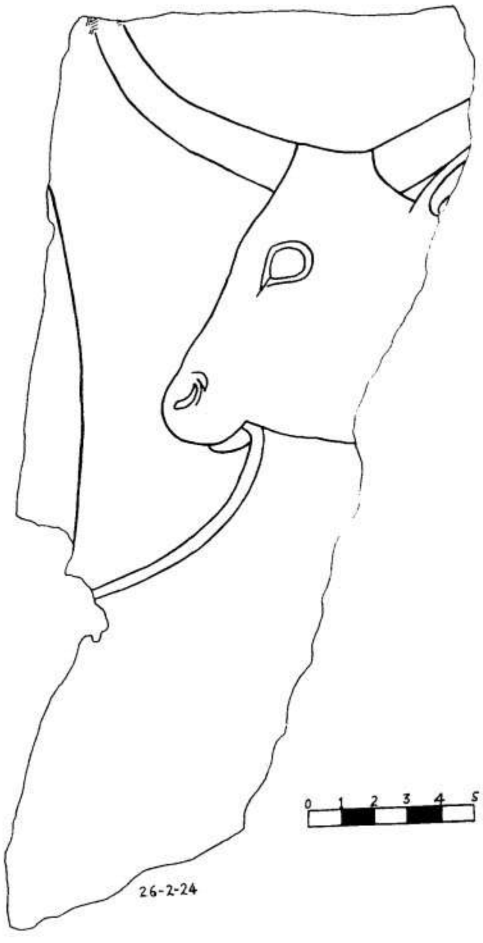

24-11-473


37-3-4h

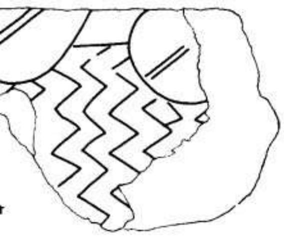

7-3-4g

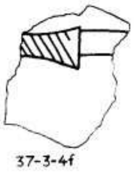

37-3-4i

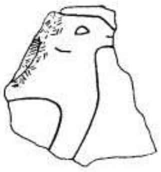

24-12-97

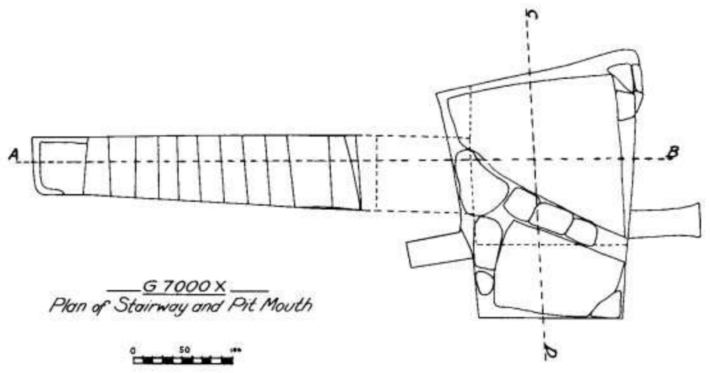


26-2-24



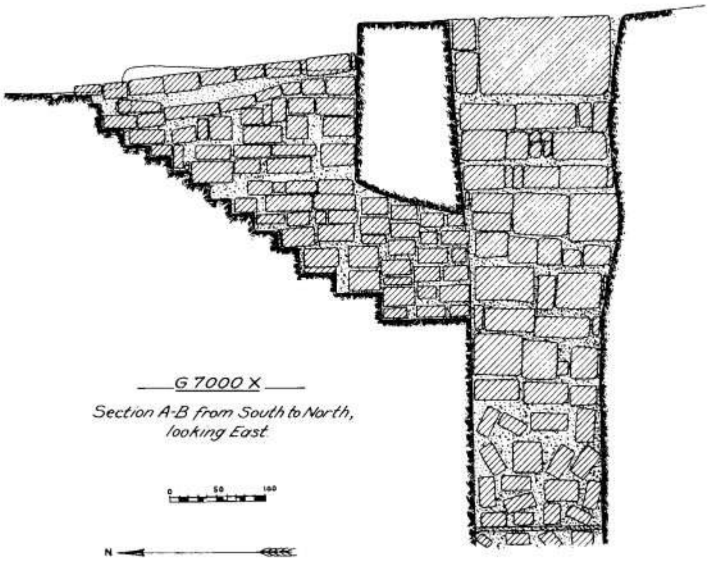

37-3-4f


24-11-922


S
A
B
D
0
50
100

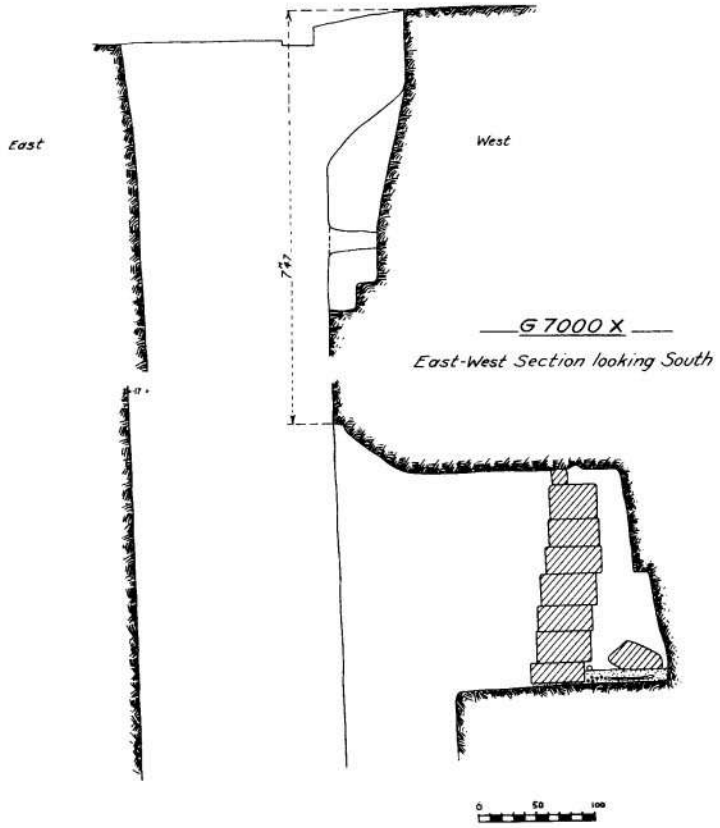
G 7000 X
Plan of Stairway and Pit Mouth

Fig. 12



G 7000 X
Section A-B from South to North, looking East

Fig. 13


East
West
7.47
0
50
100

G 7000 X
East-West Section looking South

Fig. 14

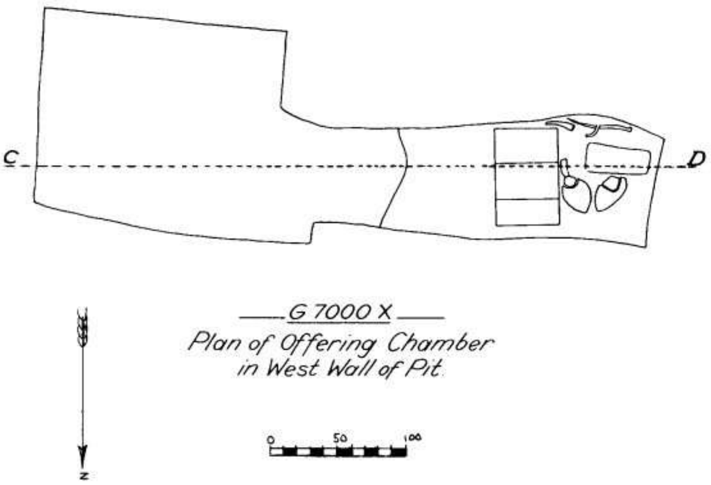

C
D
G 7000 X
Plan of Offering Chamber
in West Wall of Pit.
0
50
100
N

Fig. 15

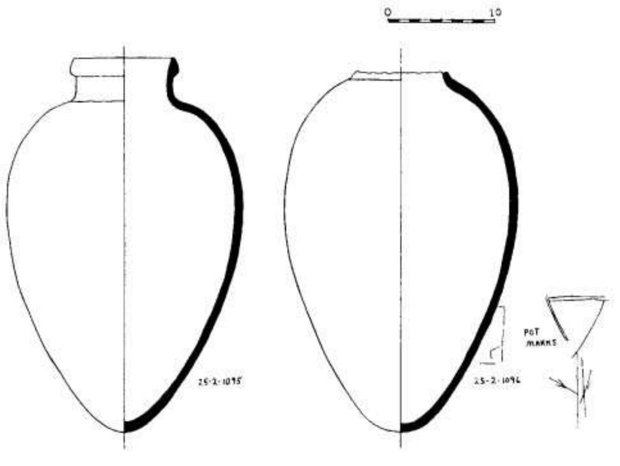

0
10
25-2-1095
25-2-1096
POT
MARKS

Fig. 16

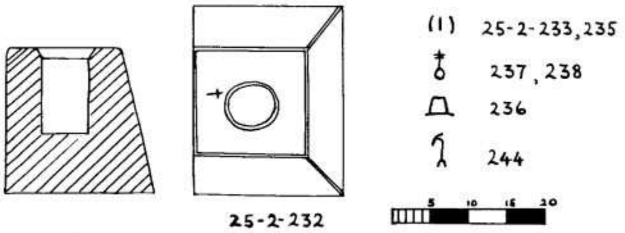

(1) 25-2-233, 235
237, 238
236
244
25-2-232
5
10
15
20

Fig. 17

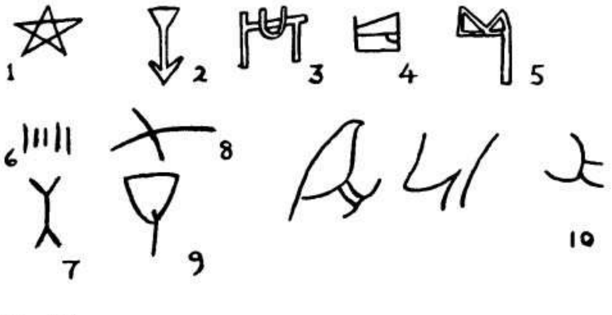

1
2
3
4
5
6
7
8
9
10

Fig. 18

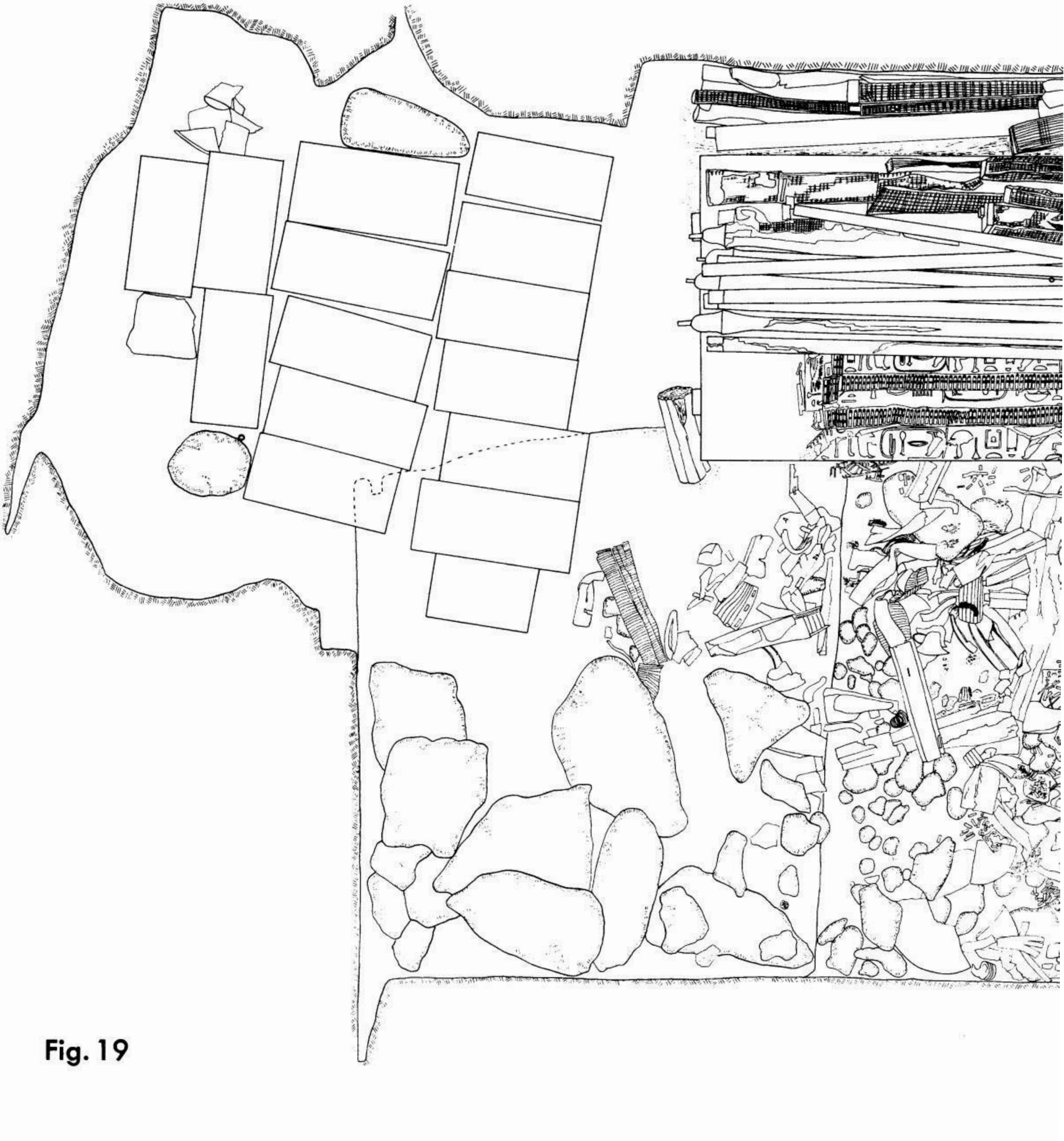
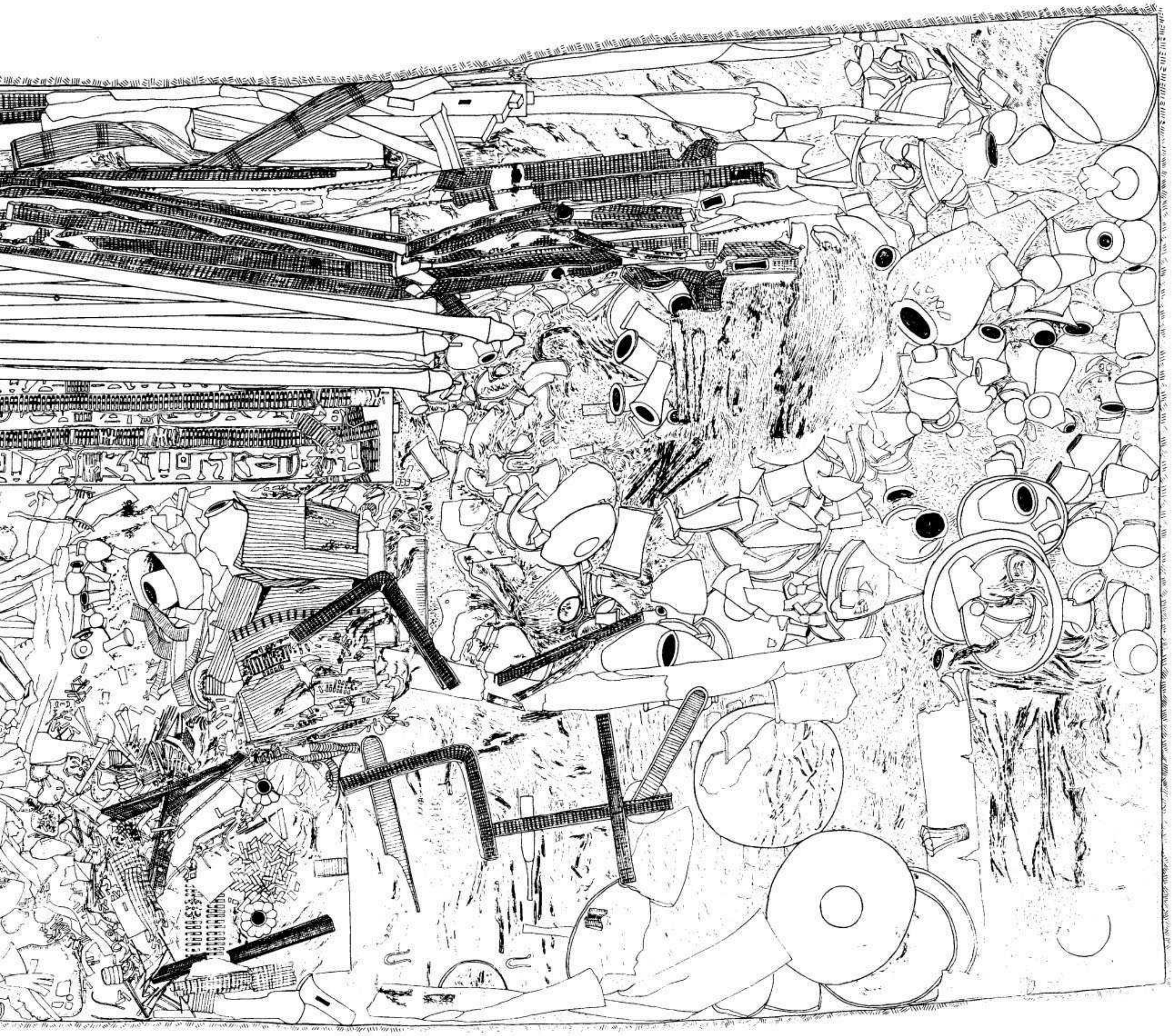


Fig. 19



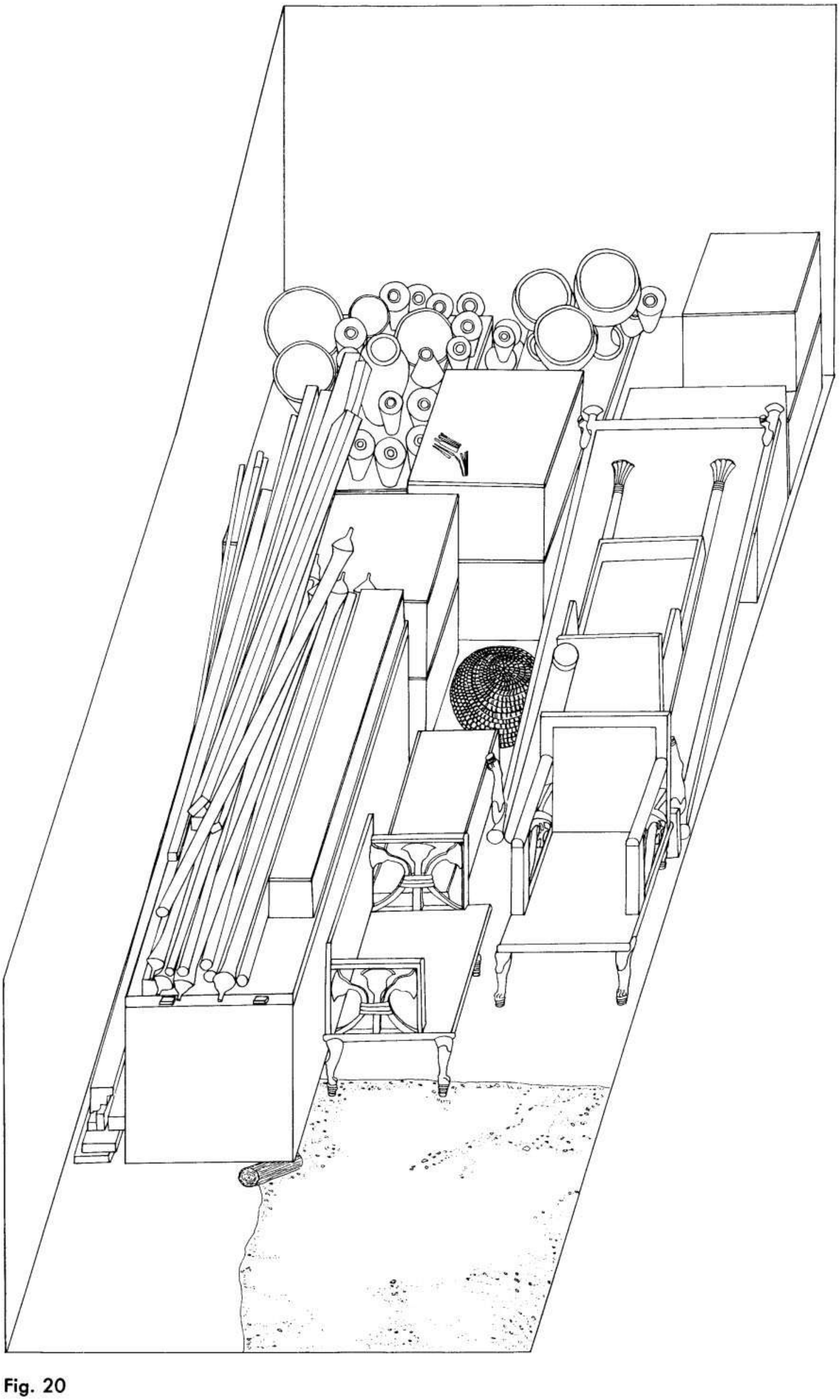


Fig. 20

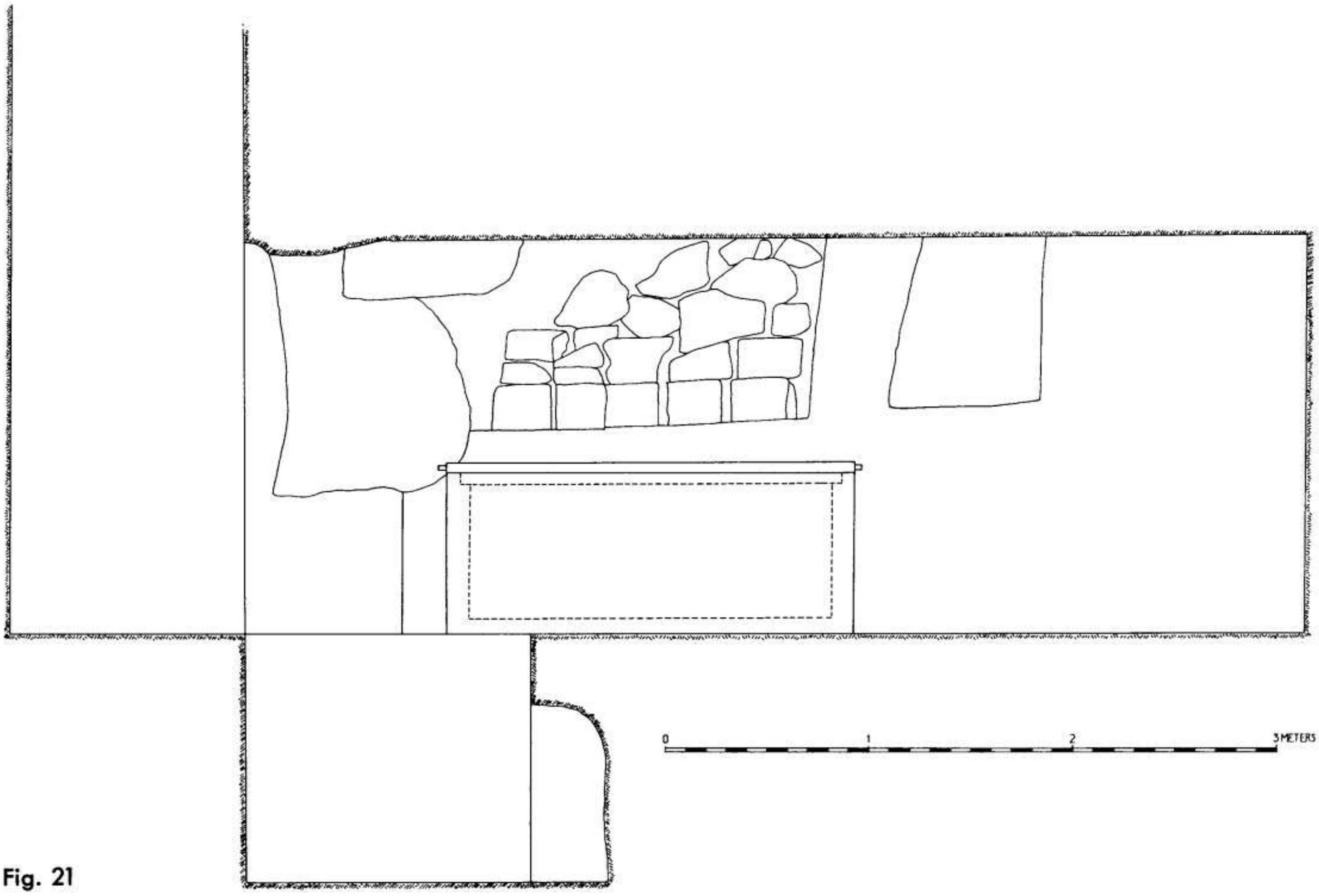

0
1
2
3METERS

Fig. 21

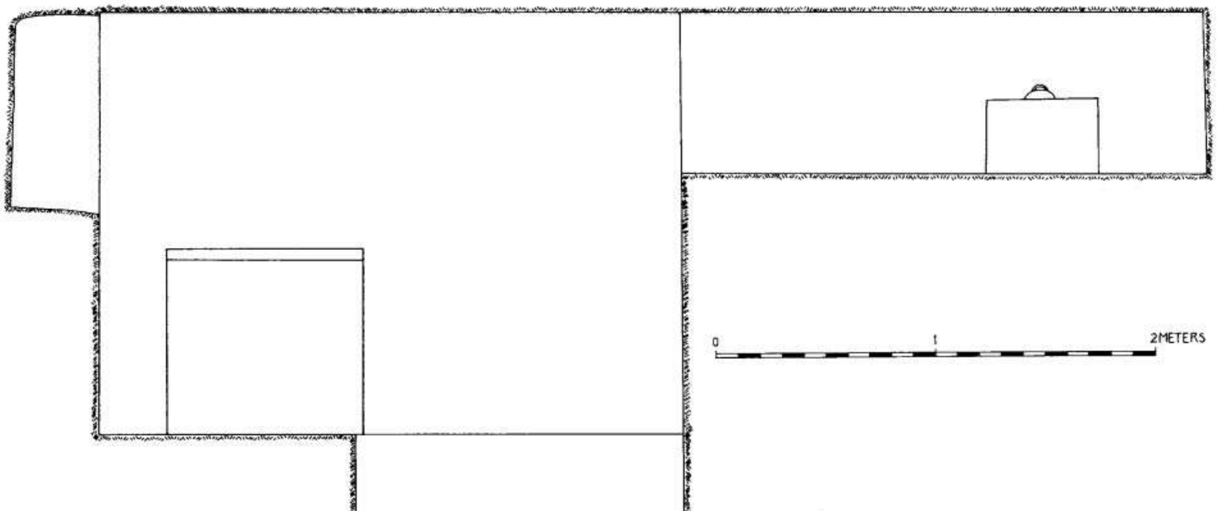


Fig. 22

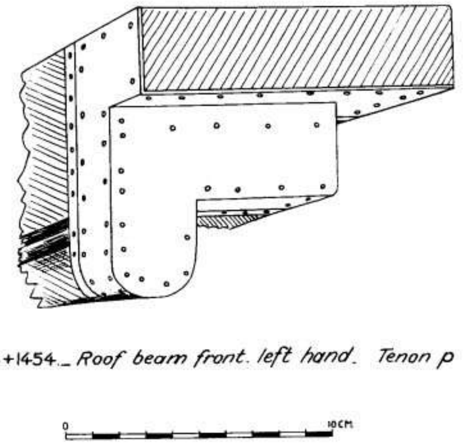

1405+1454._ Roof beam front. left hand. Tenon p
0
10CM

Fig. 23a

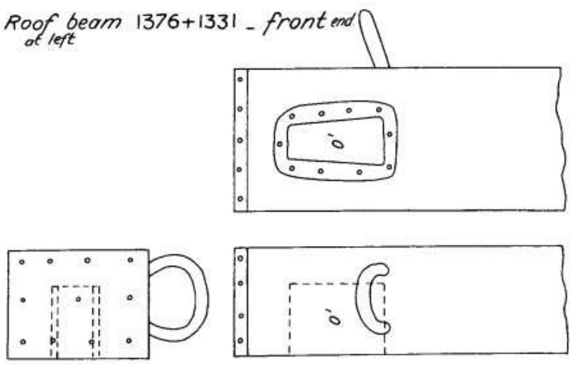

Roof beam 1376+1331 _ front end of left
o'
o'

Fig. 23c

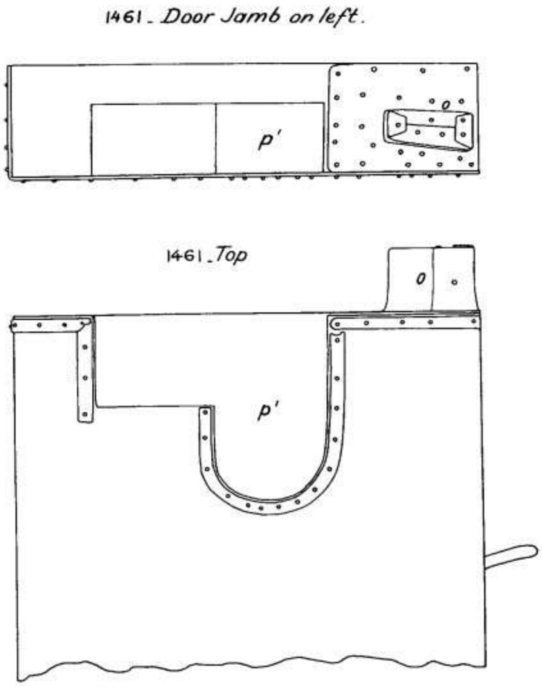

1461_ Door Jamb on left.
o
p'
1461_Top
o
p'

Fig. 23b

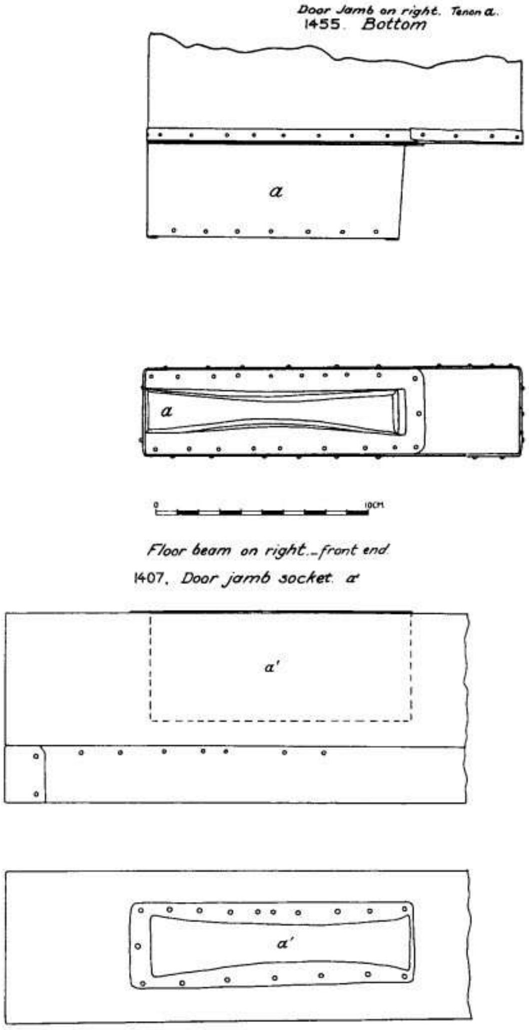
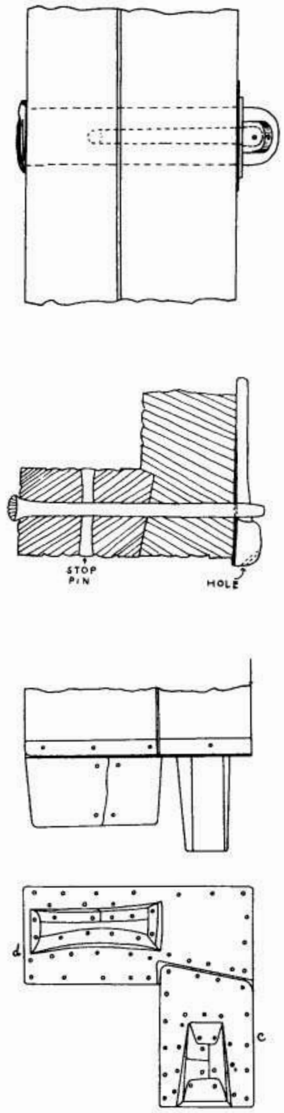
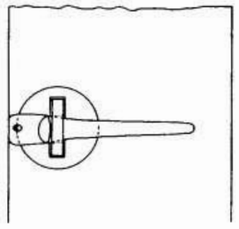
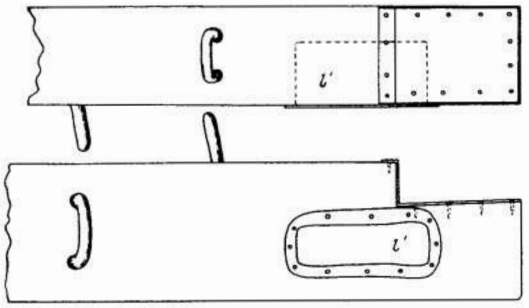

Door Jamb on right. Tenon a.
1455. Bottom
a
a
0
10CM
Floor beam on right._front end
1407. Door jamb socket. a'
a'
a'

Fig. 24

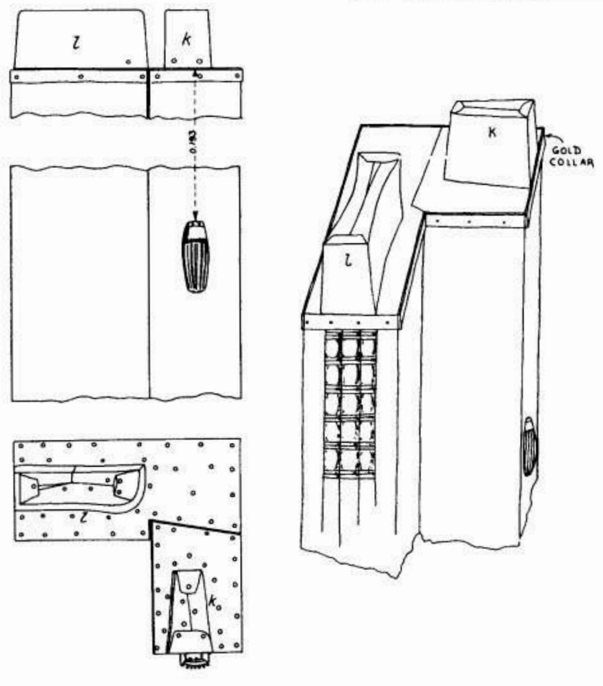

STOP PIN
HOLE
d
c

Back corner post on right.
1372+1373
Bottom.

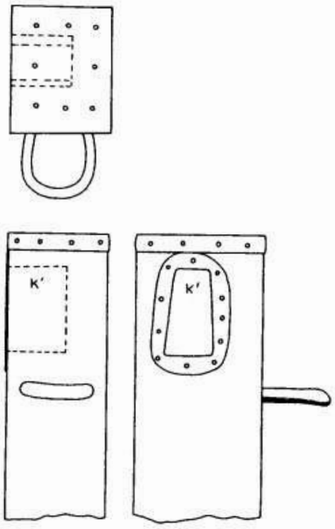




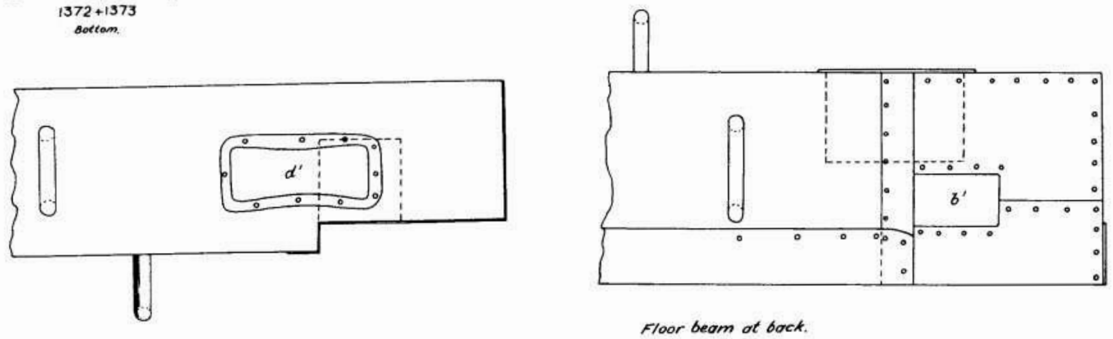
Roof beam at back.
1375+1326
Right Hand


l
k
0.183
l
k₀
K
l
GOLD COLLAR

Right hand corner post
1372+1373_ Top end

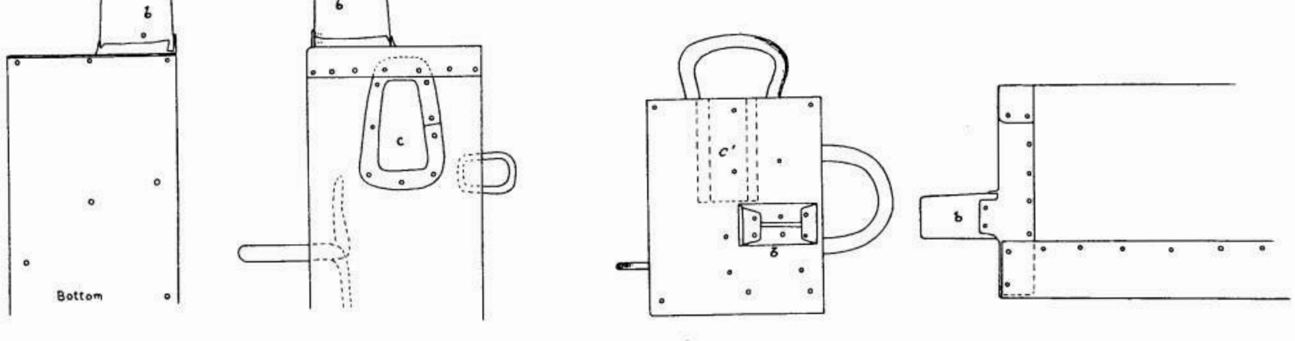


Roof beam 1325+1392_ back.
on right.



Floor beam at back.

1374_ Right Hand Corner.


b
Bottom
b
c
c'
b
b

Floor beam at right.
Right Beam 1407_ Back End Tenon b. & Socket c.

Fig. 25

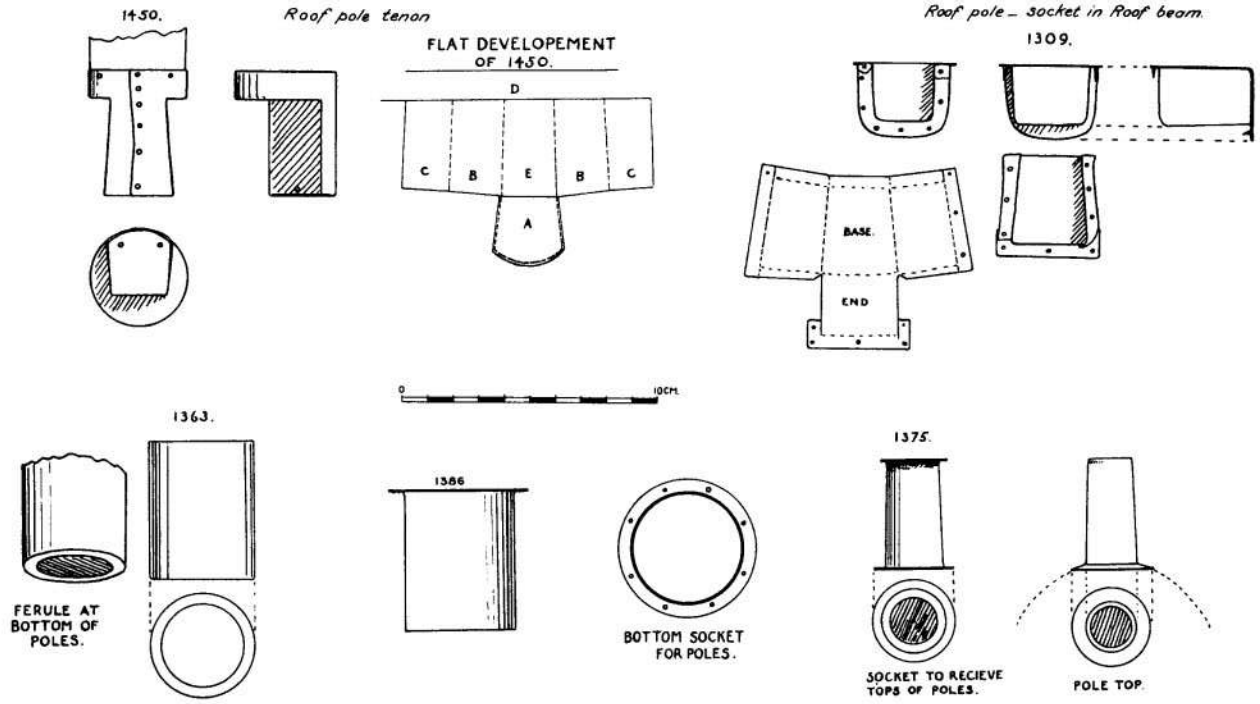

1450.
Roof pole tenon
FLAT DEVELOPEMENT OF 1450.
D
C
B
E
B
C
A
Roof pole – socket in Roof beam.
1309.
BASE.
END
0
10CM.
1363.
1386
1375.
FERULE AT BOTTOM OF POLES.
BOTTOM SOCKET FOR POLES.
SOCKET TO RECIEVE TOPS OF POLES.
POLE TOP.

Fig. 26

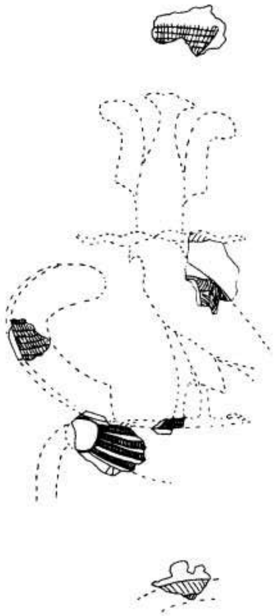


Fig. 27

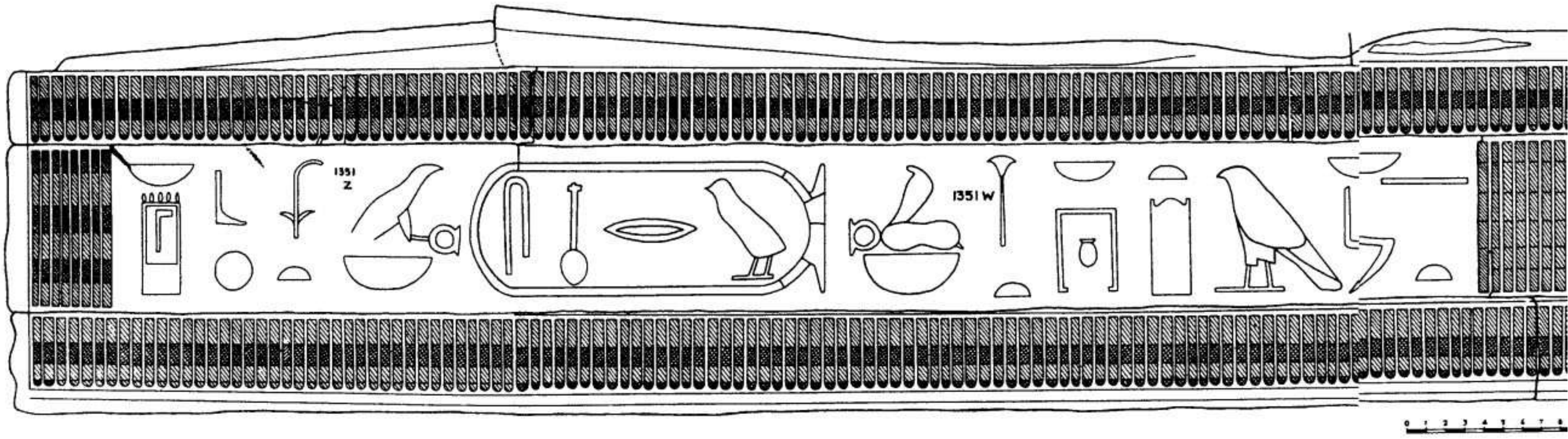

1351
Z
1351 W
0 1 2 3 4 5 6 7 8

Fig. 28a

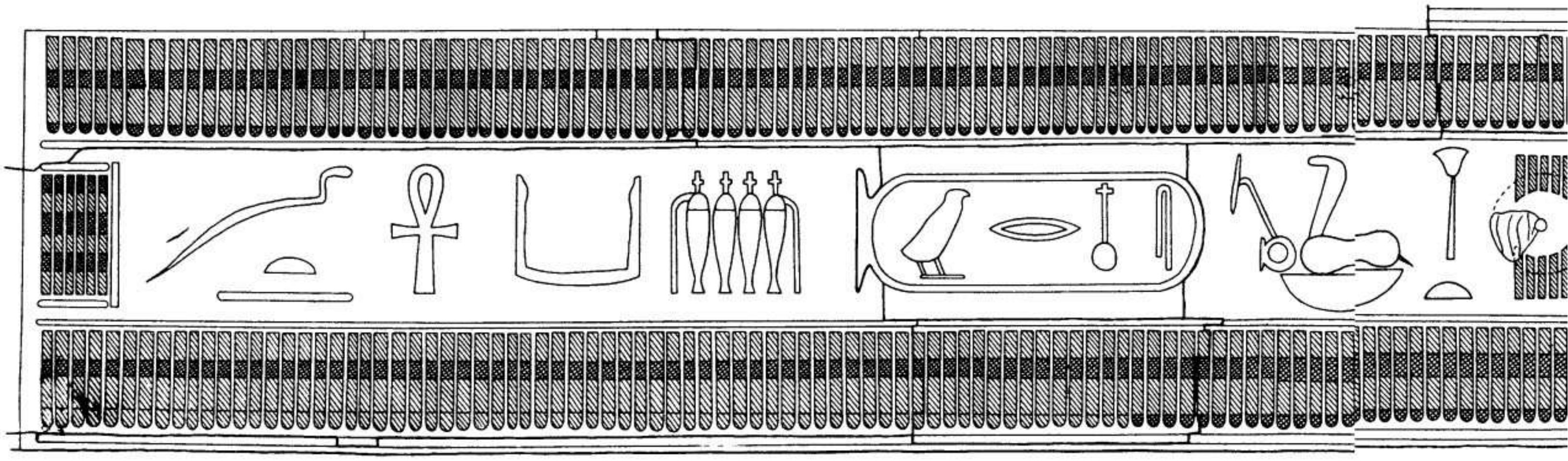
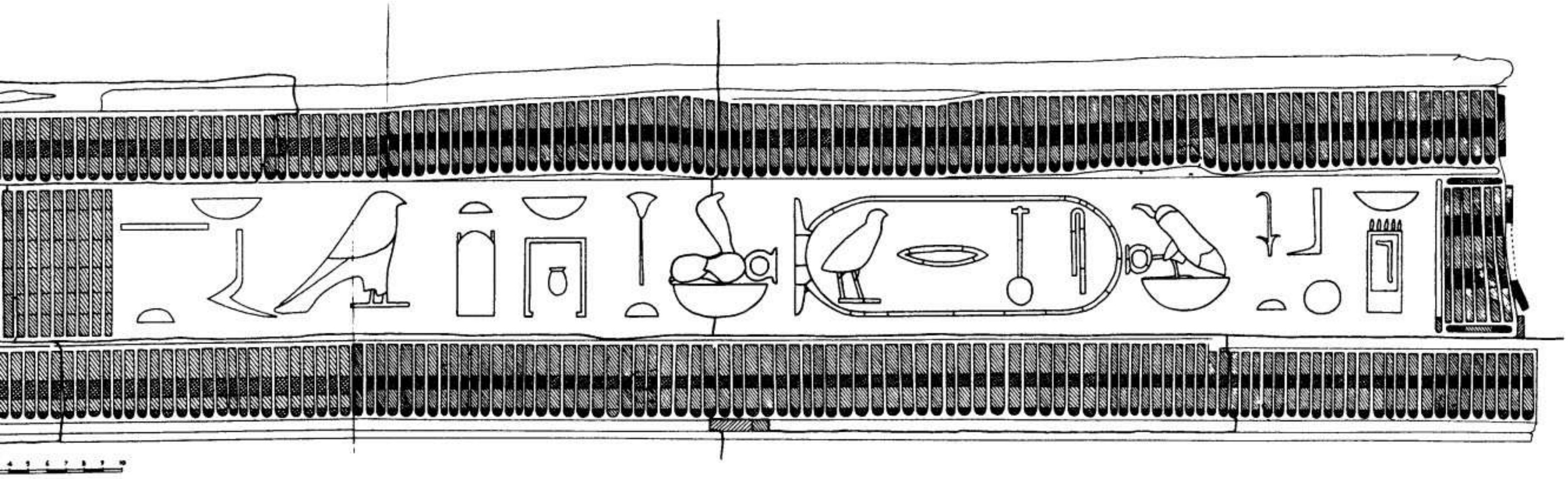
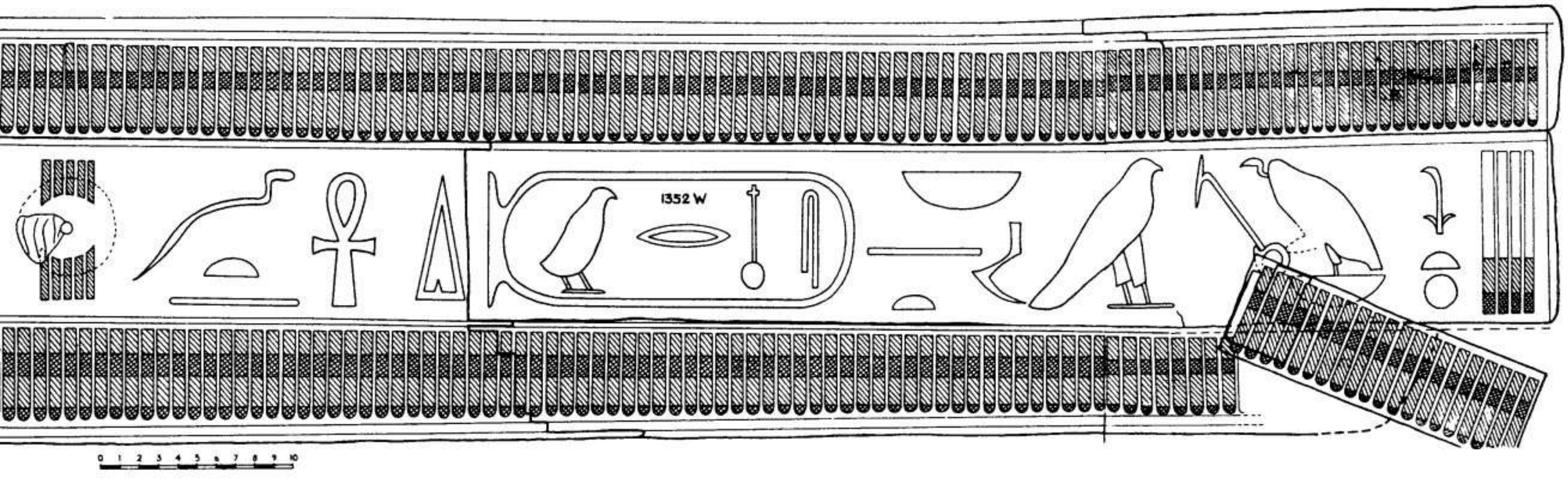


Fig. 28b


4 5 6 7 8 9 10


1352 W
0 1 2 3 4 5 6 7 8 9 10

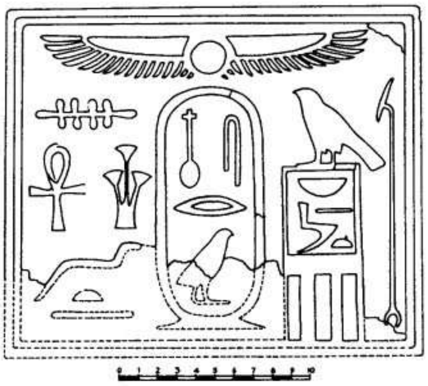


Fig. 29a

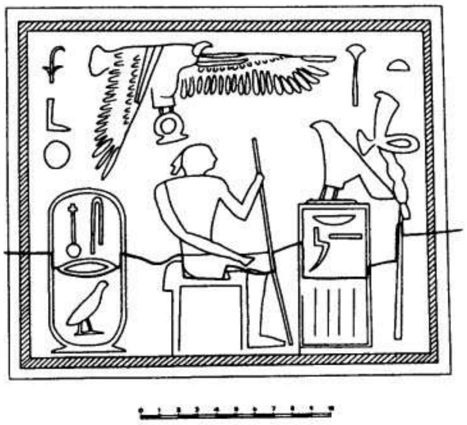


Fig. 29b

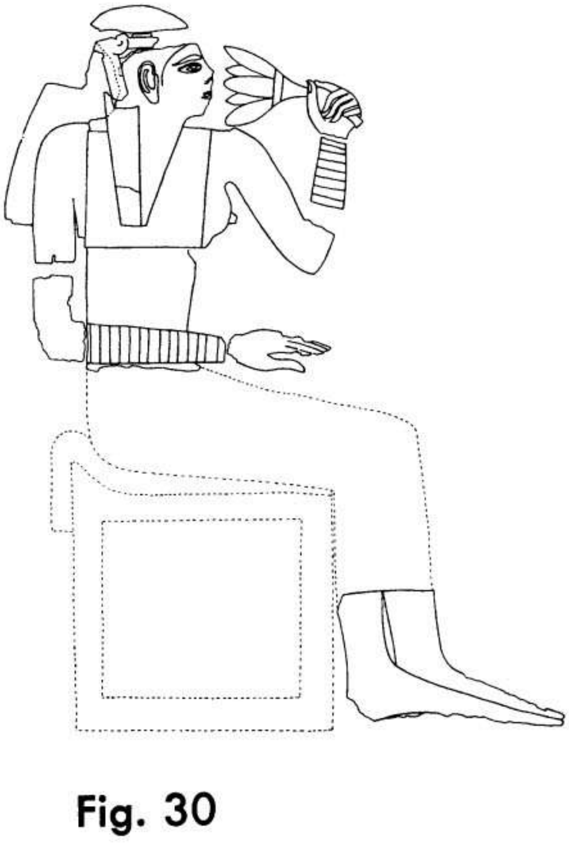


Fig. 30

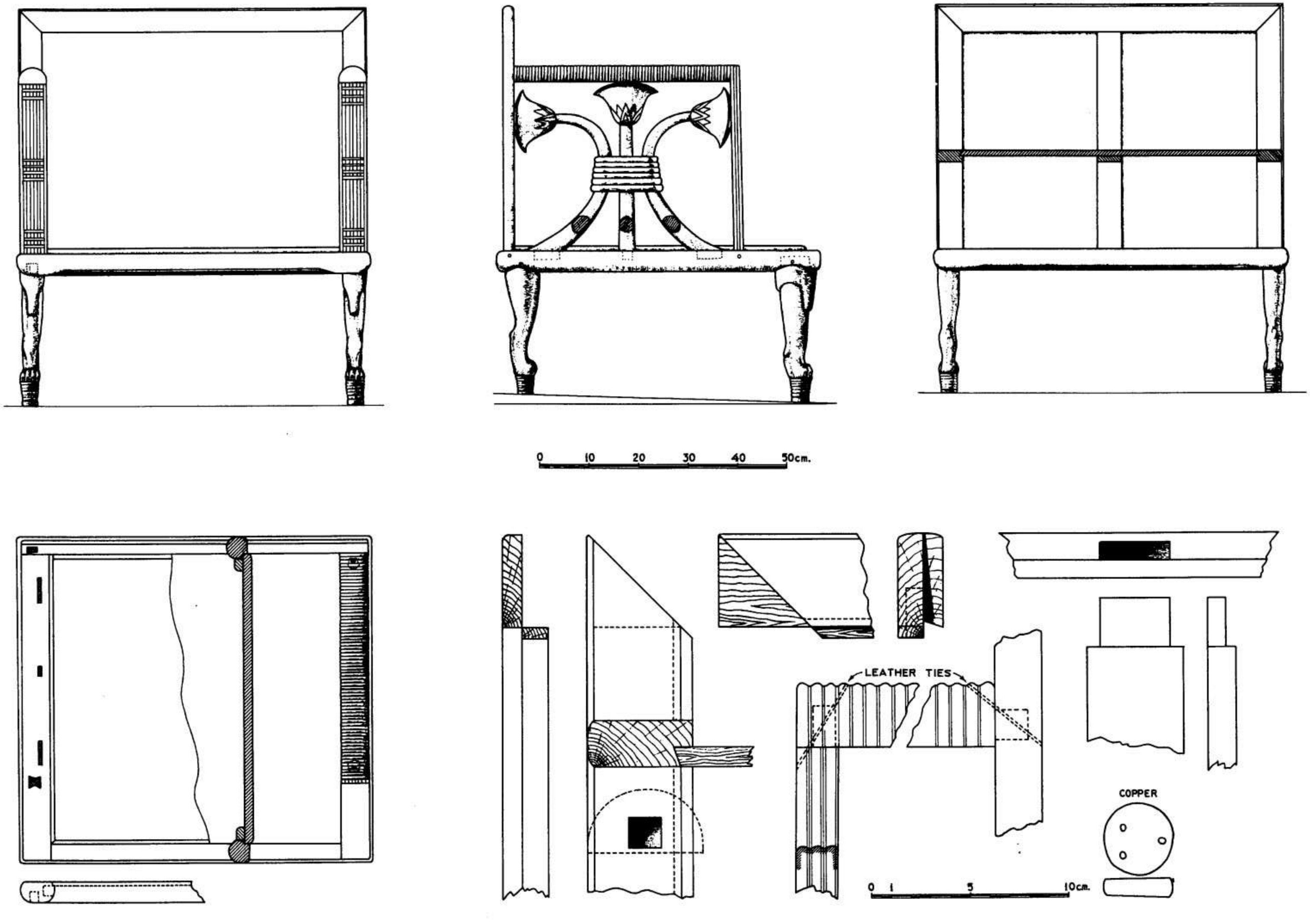

0 10 20 30 40 50cm.
LEATHER TIES
COPPER
0 1 5 10cm.

Fig. 31

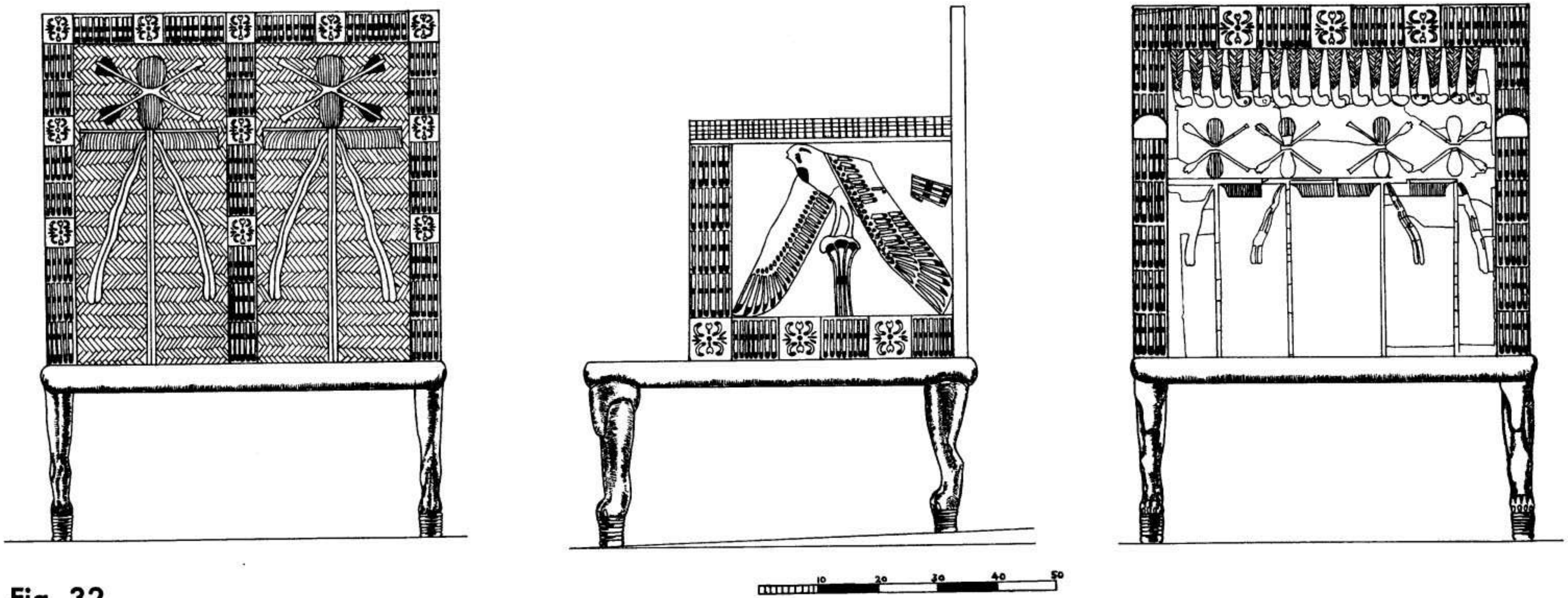

10
20
30
40
50

Fig. 32

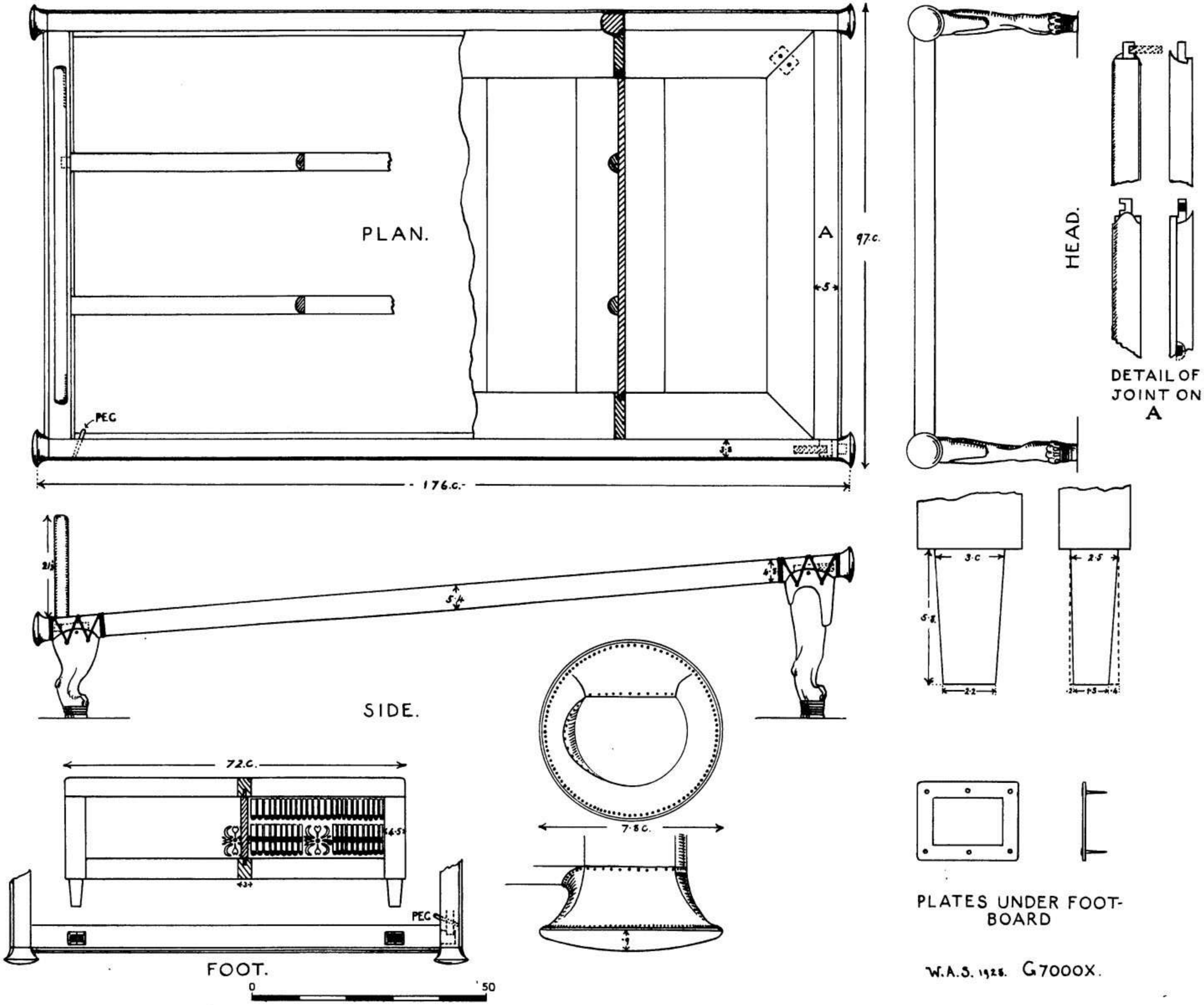

PLAN.
A
97.C.
5
PEG
3.8
176.C.
HEAD.
DETAIL OF JOINT ON A
21½
5.4
4.5
SIDE.
3.C
5.8
2.2
2.5
.2
1.5
.4
72.C.
4.5
3
7.8 C.
.9
PEG
FOOT.
0
50
PLATES UNDER FOOT-BOARD
W.A.S. 1928. G7000X.

Fig. 33

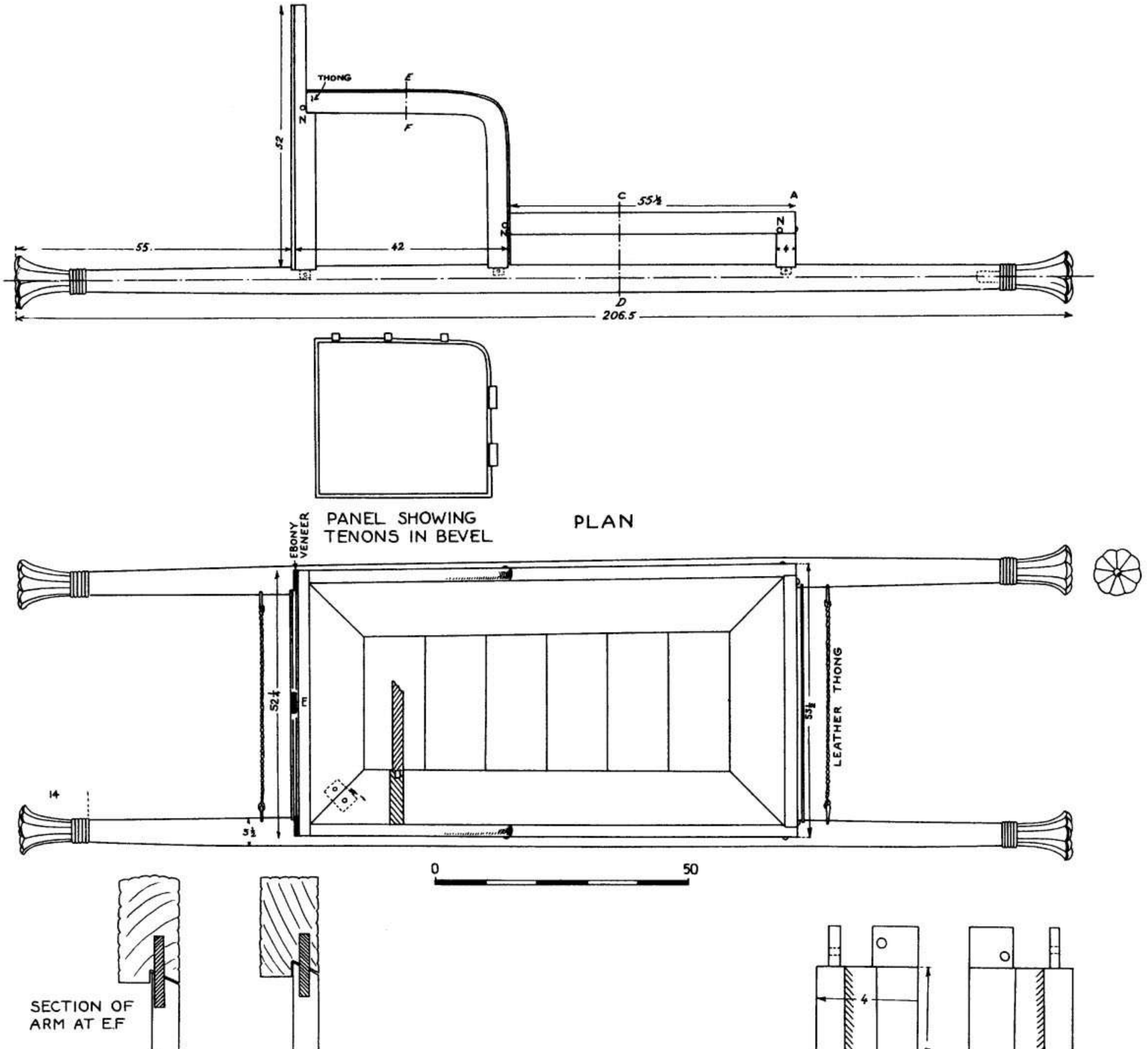
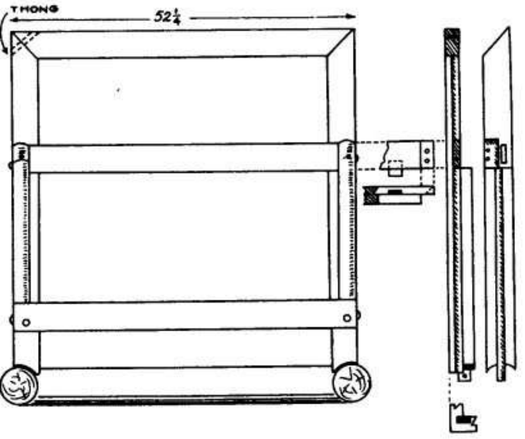
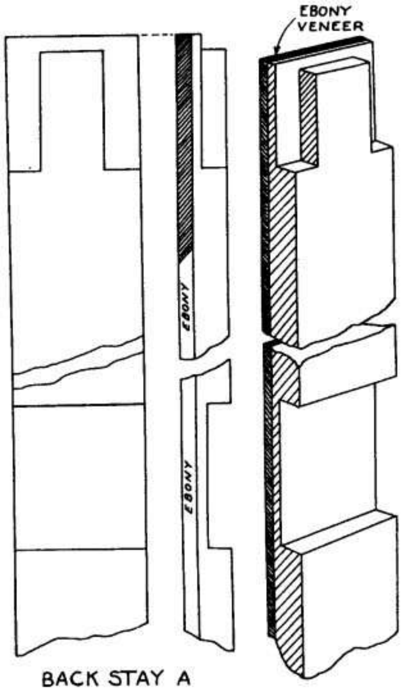

THONG
E
F
52
55.
42
C
55½
A
D
206.5
PANEL SHOWING
TENONS IN BEVEL
PLAN
EBONY
VENEER
52¼
E
53½
LEATHER THONG
14
3½
0
50
SECTION OF
ARM AT E.F
SECTION ON LINE CD
FLOOR
4
6.8
CORNER
POST A

Fig. 34

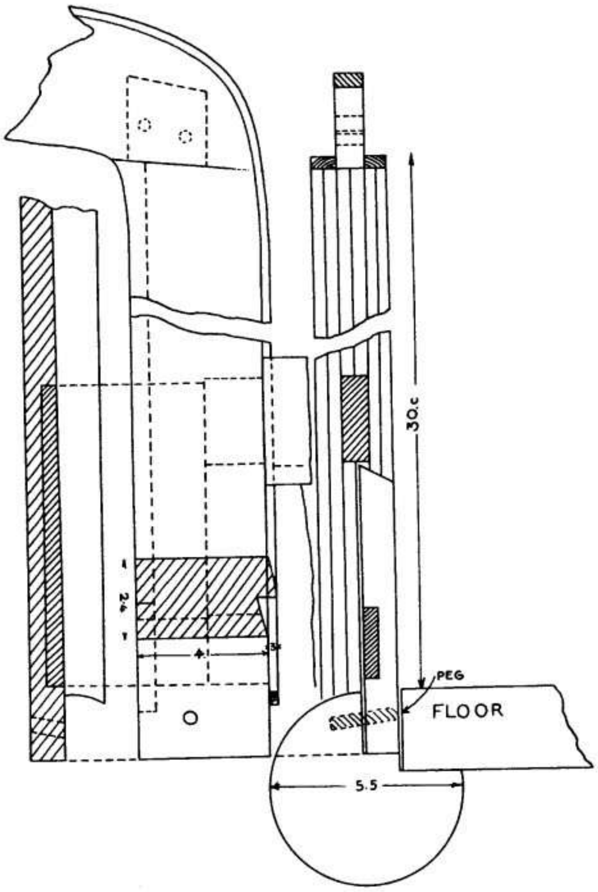
THONG

FRONT

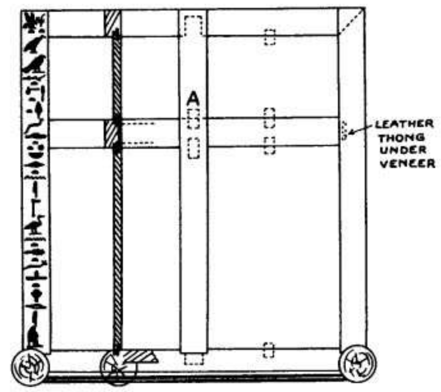


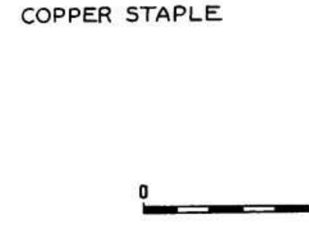

EBONY VENEER
EBONY
EBONY

BACK STAY A

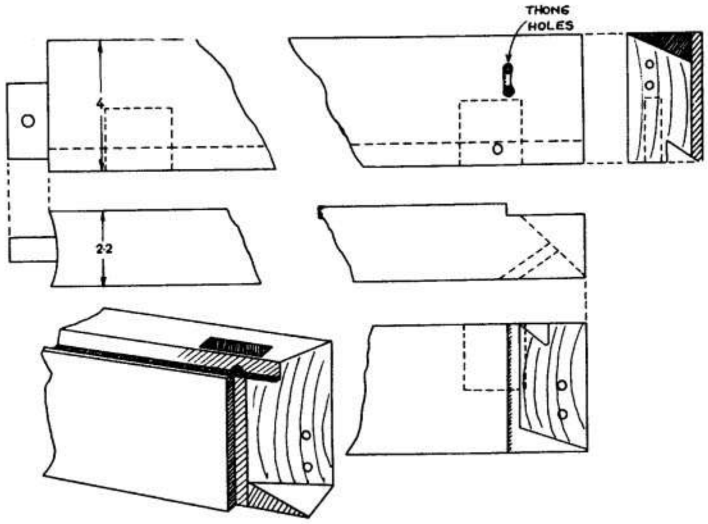

30.c
2.6
4.
3.4
PEG
FLOOR
5.5

BACK


A
LEATHER THONG UNDER VENEER

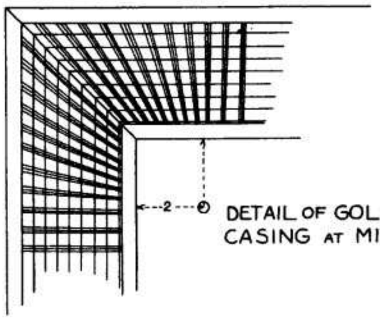

4.4
7½ C
3.5
.7
2.8

COPPER STAPLE


THONG HOLES
4
2.2

JOINTS OF SIDE BAR, A

W. A. Stewart
11.1.1929.



DETAIL OF GOLD CASING AT MITRE

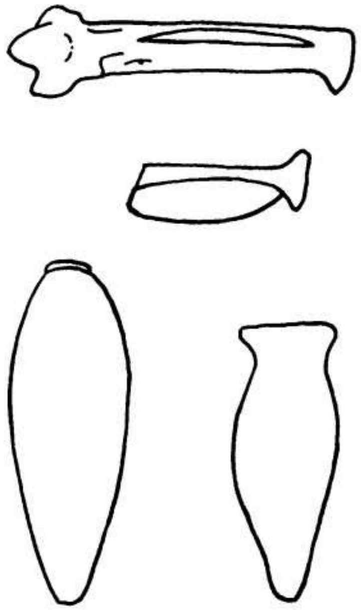


Fig. 35

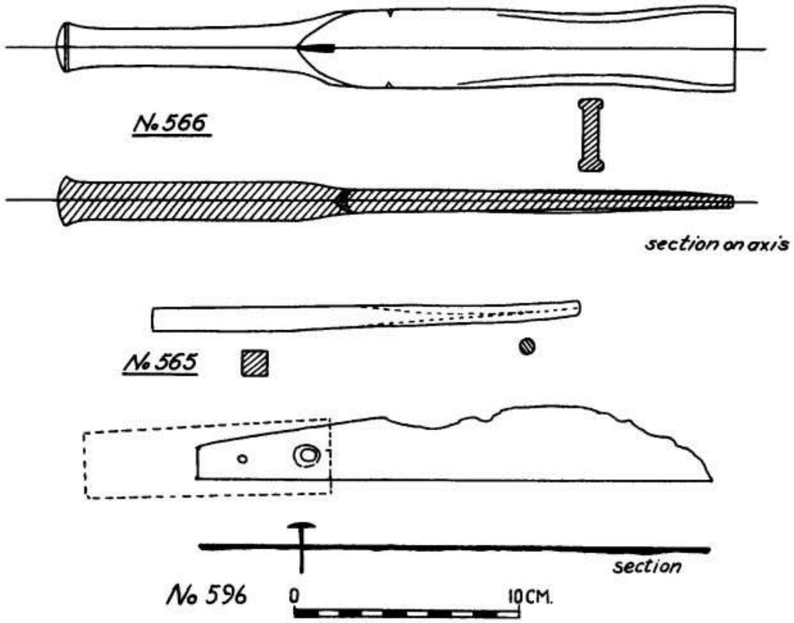

No 566
section on axis
No 565
section
No 596
0
10 CM.

Fig. 36

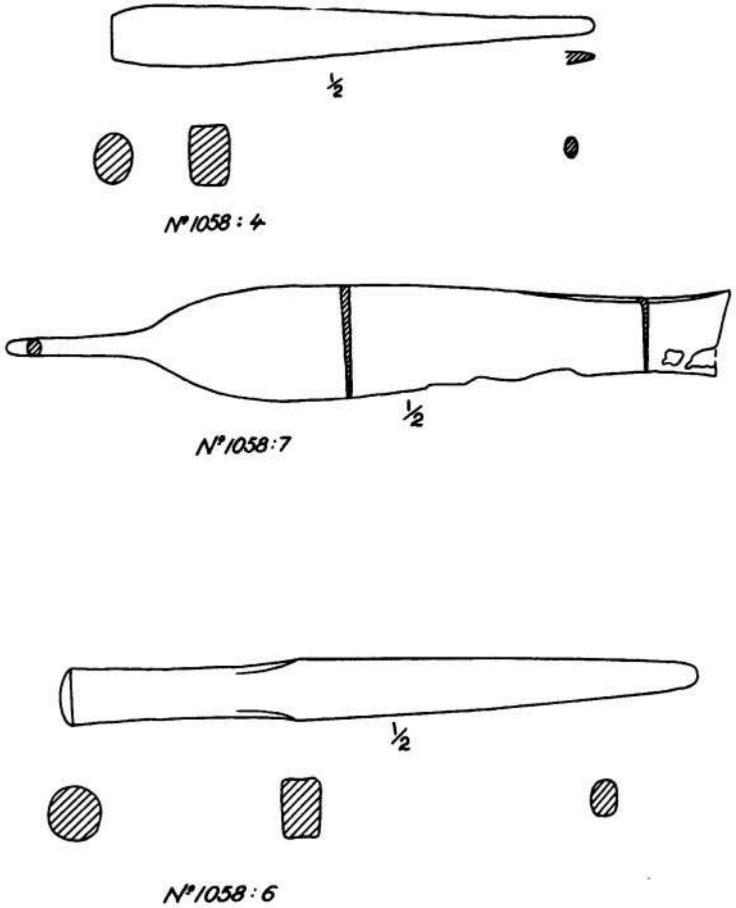

½
Nº 1058 : 4
½
Nº 1058:7
½
Nº 1058 : 6

Fig. 37

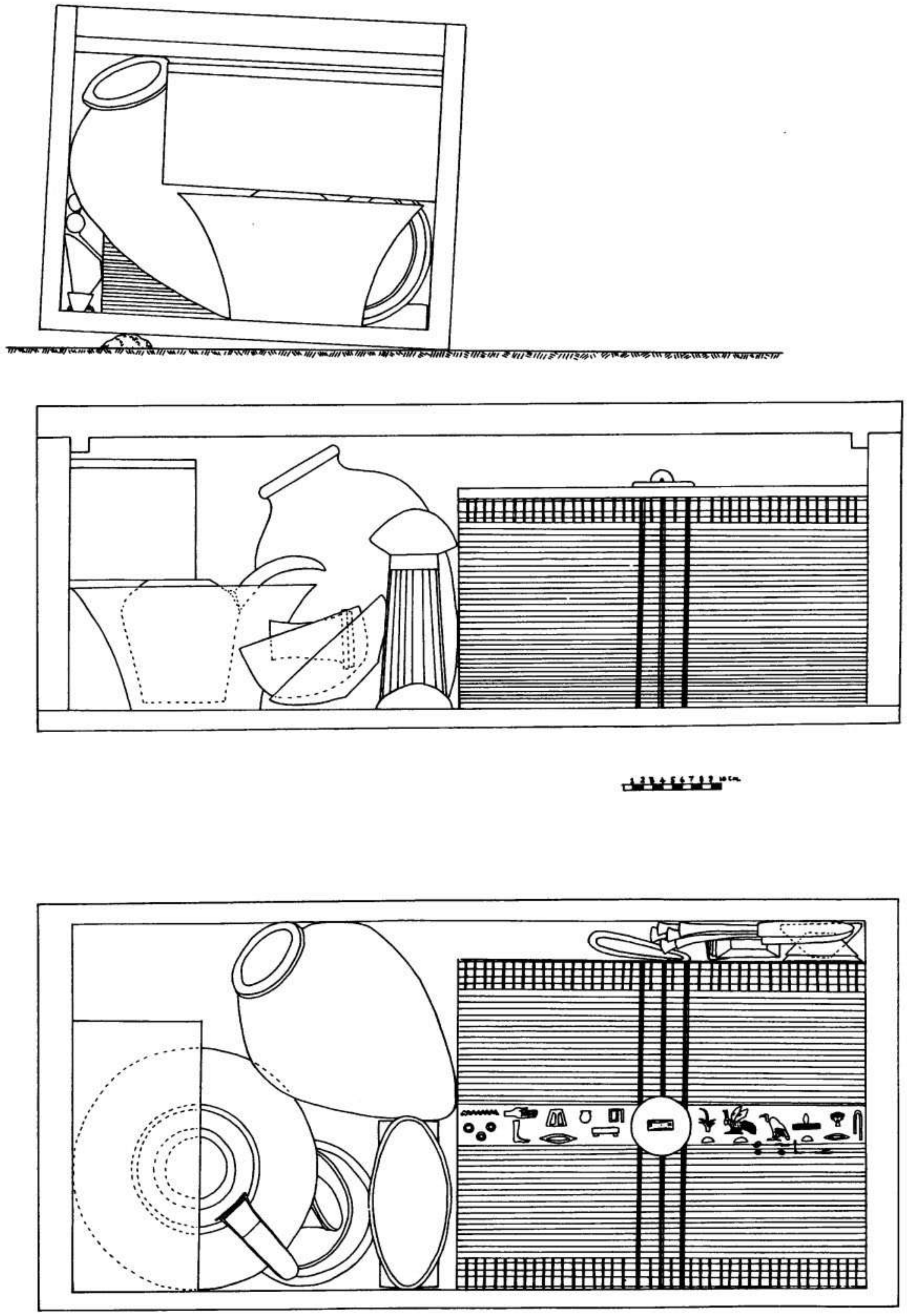

1 2 3 4 5 6 7 8 9 10 cm.

Fig. 38

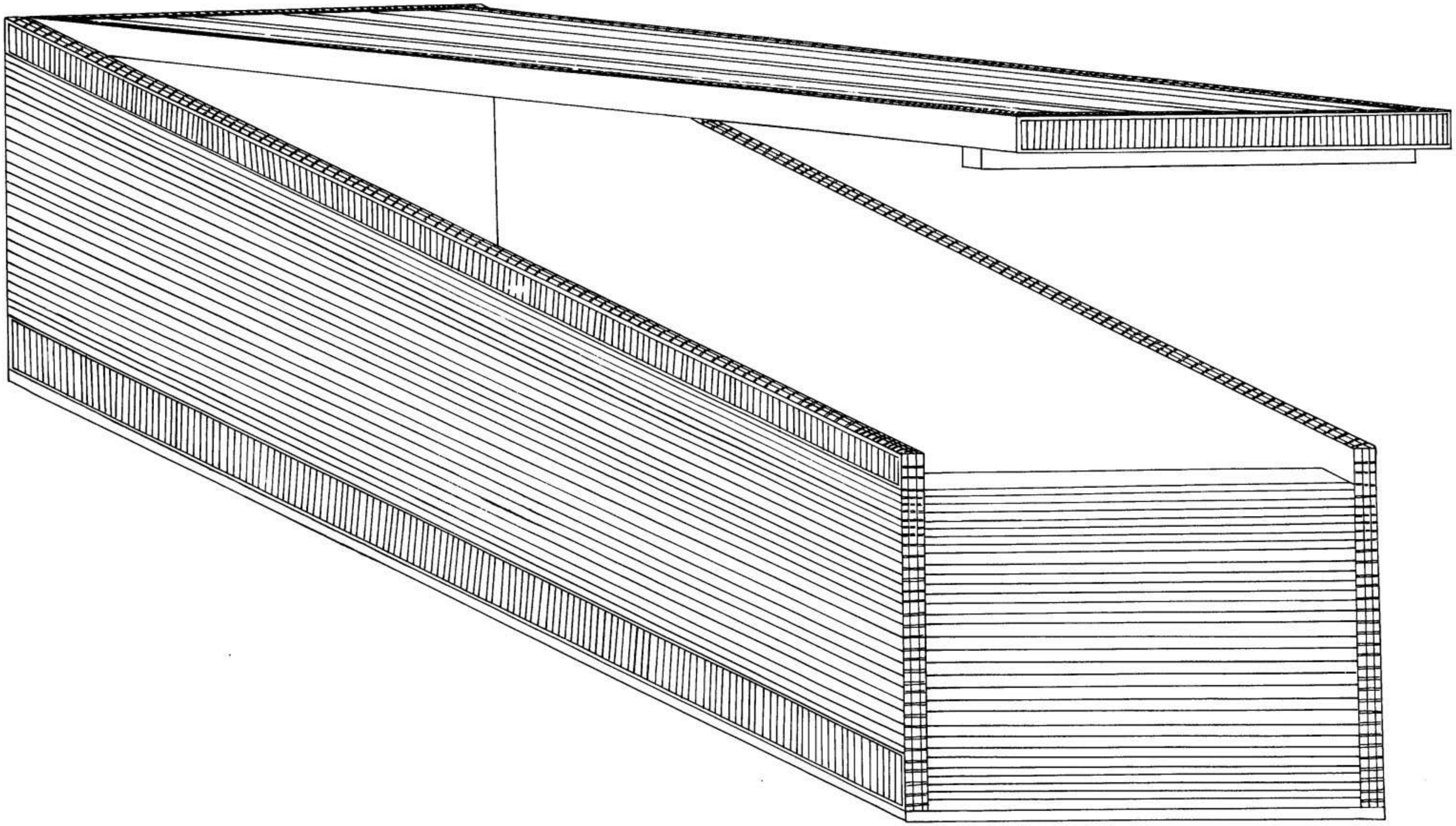

1 2 3 4 5 6 7 8 9 10 Cm.

Fig. 39

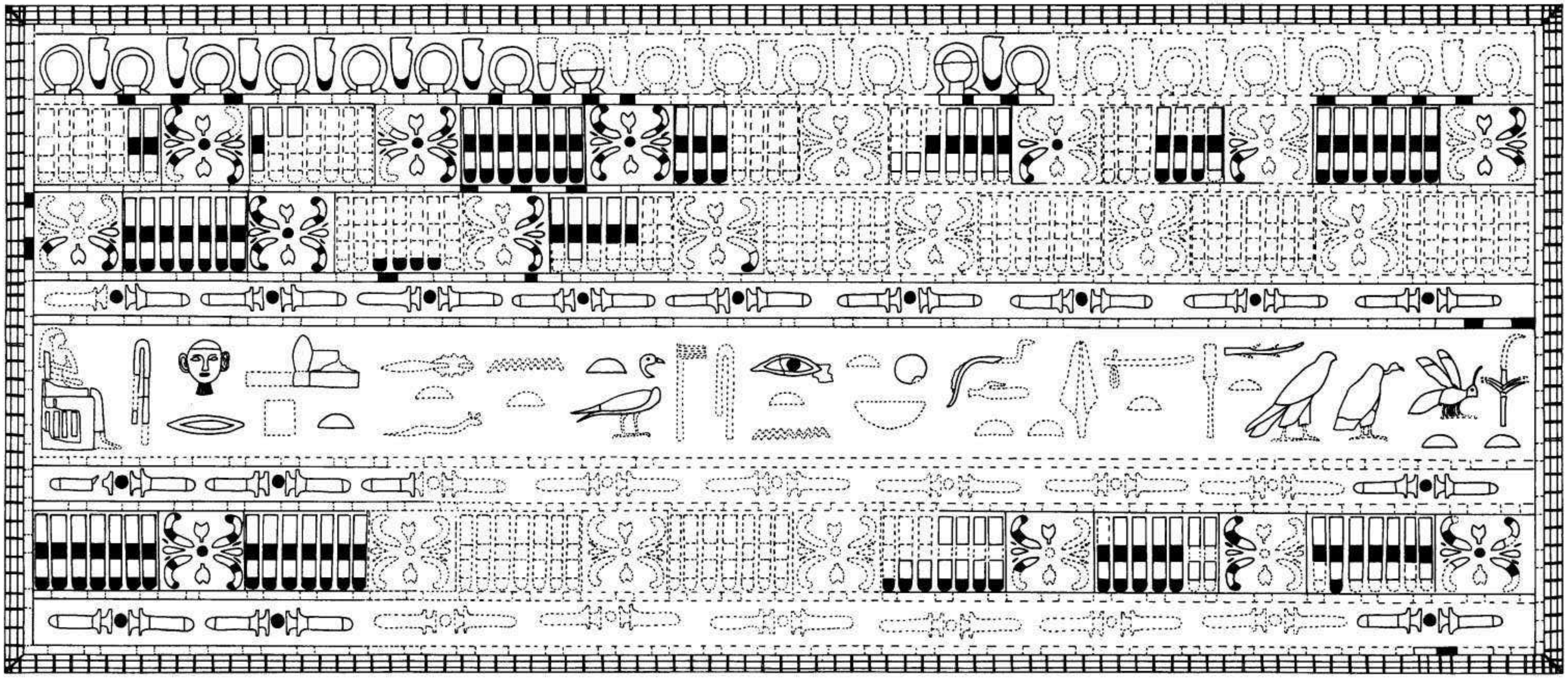


Fig. 40

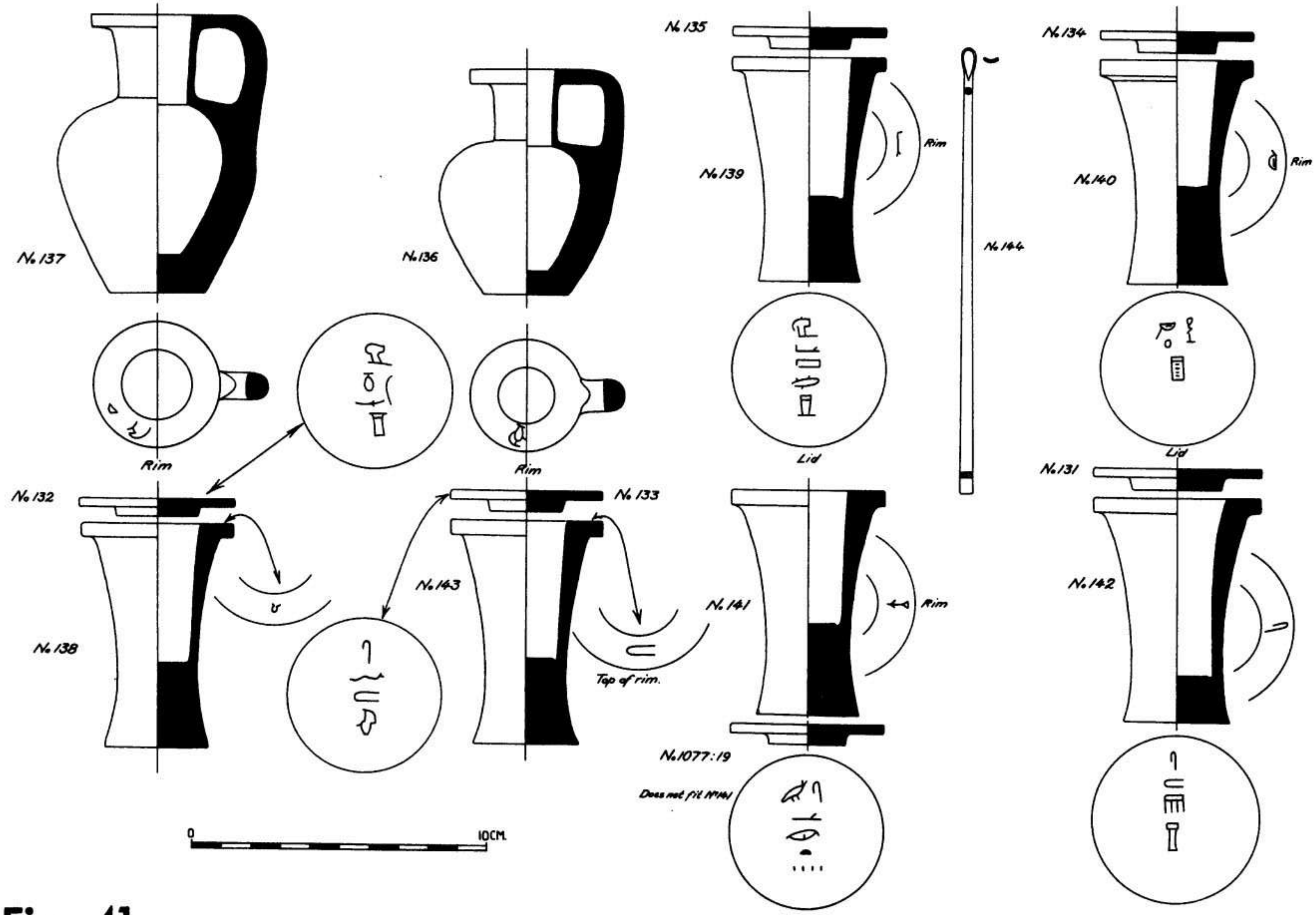

No. 137
No. 136
No. 135
No. 139
Rim
No. 144
No. 134
No. 140
Rim
Rim
Rim
Lid
Lid
No. 131
No. 132
No. 133
No. 143
No. 138
Top of rim.
No. 141
Rim
No. 142
No. 1077:19
Does not fit No. 141
0
10CM.

Fig. 41

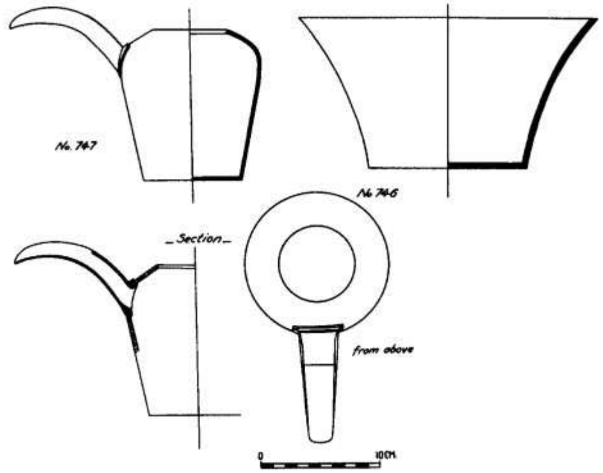

No. 747
No. 746
Section
from above
0
10CM

Fig. 42

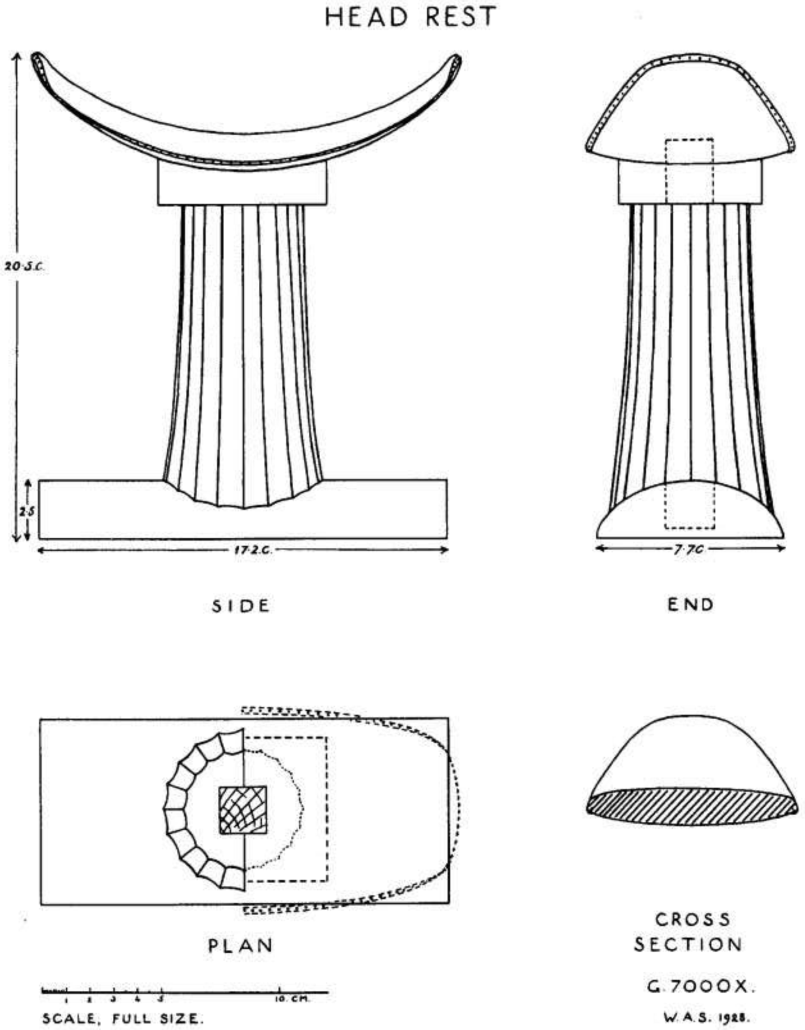
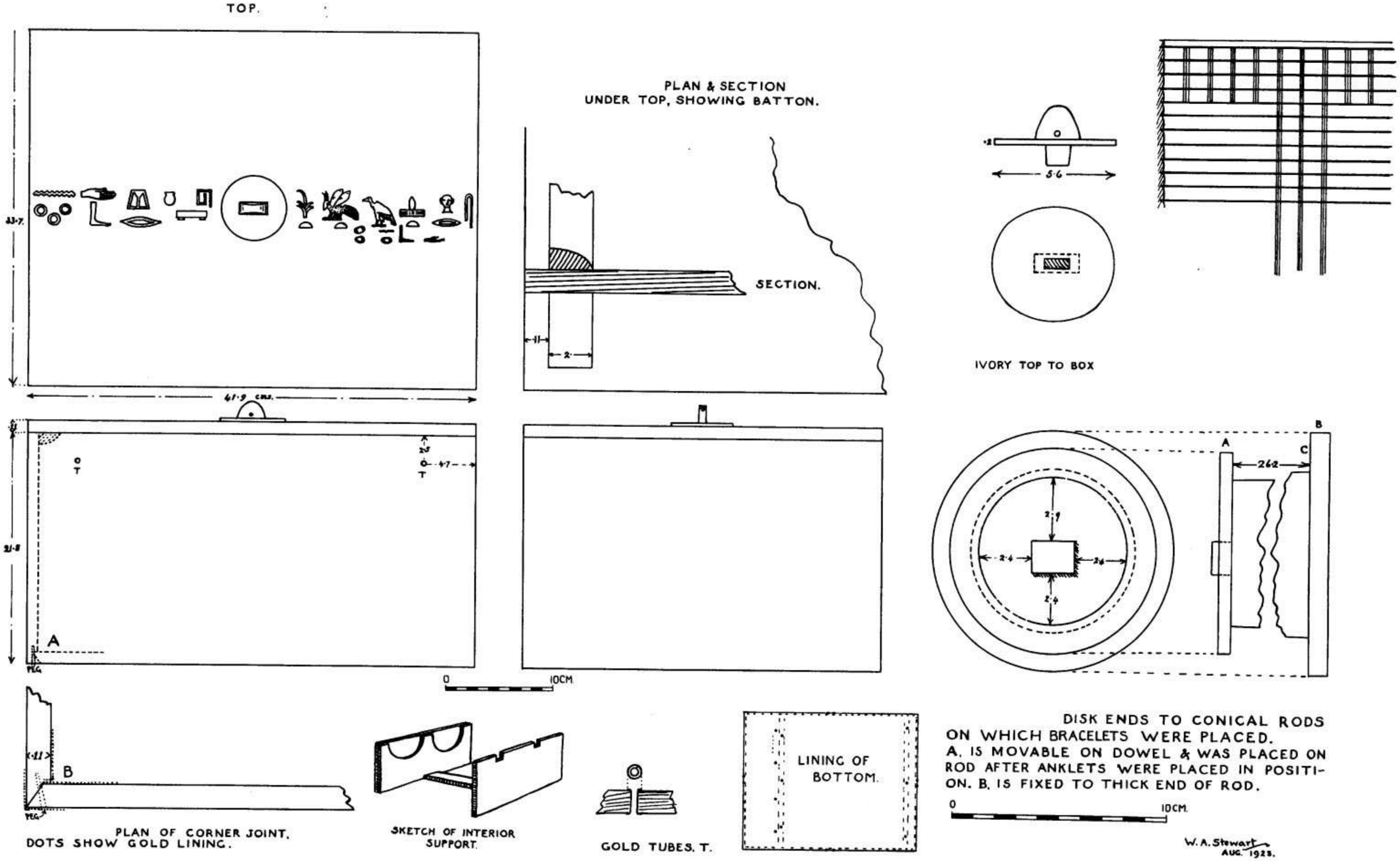

HEAD REST
20·5 C.
2·5
17·2 C.
7·7 C.
SIDE
END
PLAN
CROSS SECTION
1 2 3 4 5 10 CM.
SCALE, FULL SIZE.
G 7000 X.
W.A.S. 1928.

Fig. 43


TOP.
33·7.
41·9 cms.
21·8
2·5
4·7
T
A
PEG
PLAN & SECTION
UNDER TOP, SHOWING BATTON.
SECTION.
·11
·2·
·2
5·6
IVORY TOP TO BOX
A
B
C
26·2
2·9
2·4
0
10CM.
B
·11
PEG

PLAN OF CORNER JOINT.
DOTS SHOW GOLD LINING.

SKETCH OF INTERIOR SUPPORT.

GOLD TUBES. T.

LINING OF BOTTOM.

DISK ENDS TO CONICAL RODS ON WHICH BRACELETS WERE PLACED.
A. IS MOVABLE ON DOWEL & WAS PLACED ON ROD AFTER ANKLETS WERE PLACED IN POSITION. B. IS FIXED TO THICK END OF ROD.

W. A. Stewart
AUG. 1923.

Fig. 44

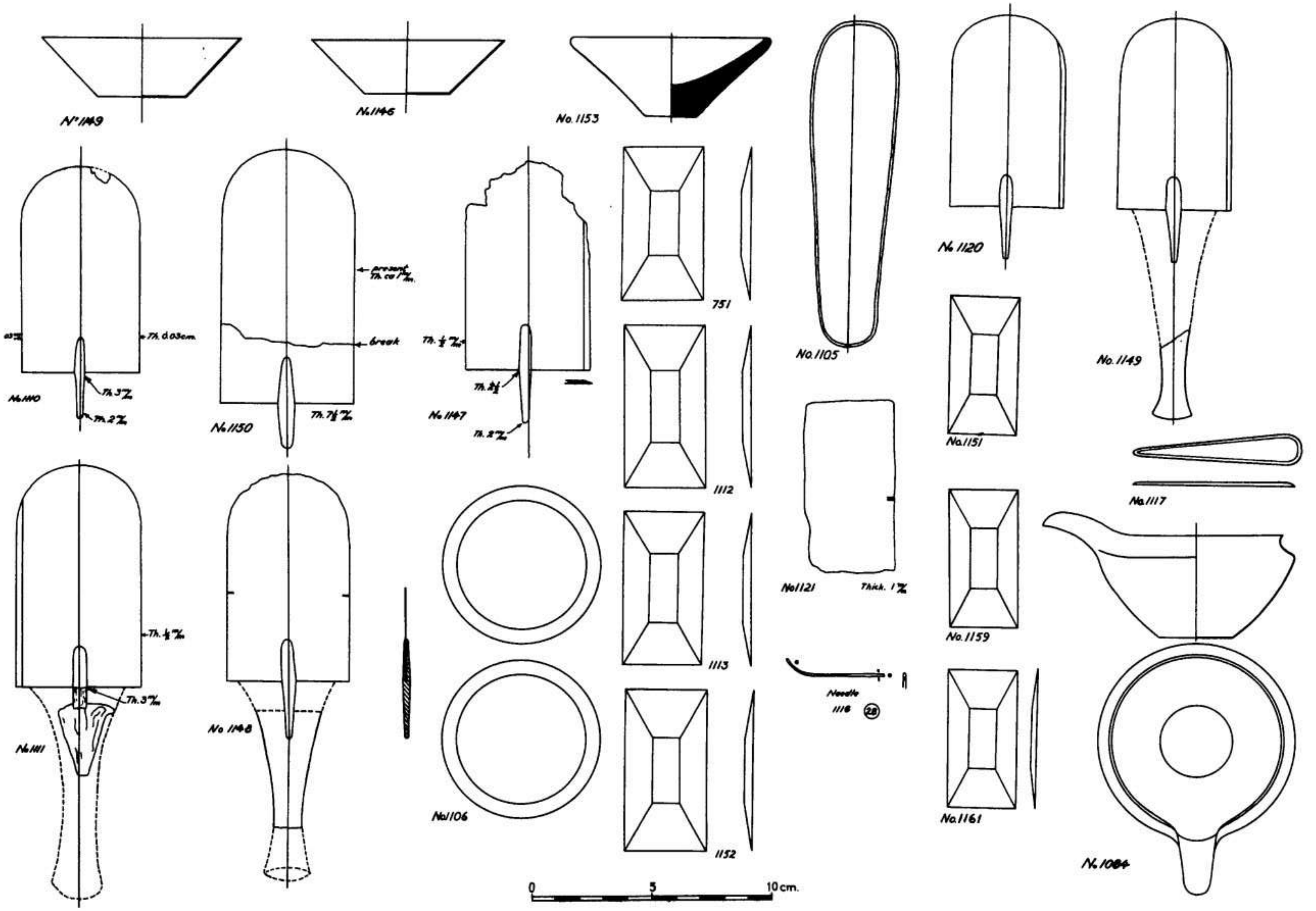

N°1149
No.1146
No.1153
No.1105
No.1120
No.1149
0.3 m/m
Th. d.03cm
Th. 3 m/m
Th. 2 m/m
No.1110
present Th. ca 1 m/m
break
Th. 7½ m/m
No.1150
Th. ½ m/m
Th. 2½
No.1147
Th. 2 m/m
751
1112
1113
1152
No.1151
No.1159
No.1161
No.1117
No.1121
Thick. 1 m/m
Needle
1118
㉘
Th. ½ m/m
Th. 3 m/m
No.1111
No 1148
No.1106
N.1084
0
5
10 cm.

Fig. 45

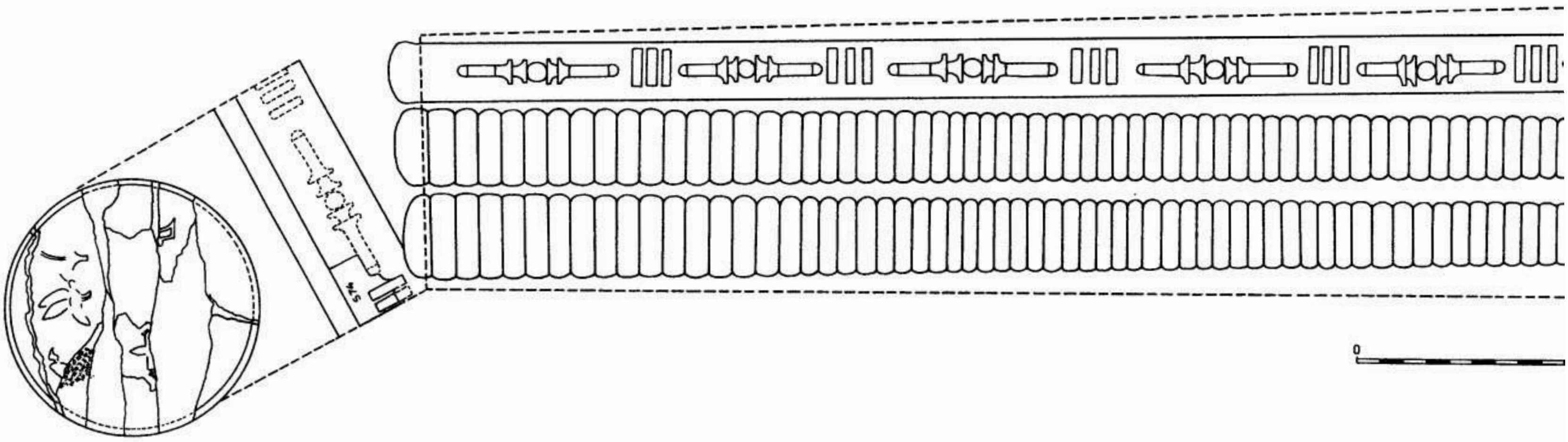
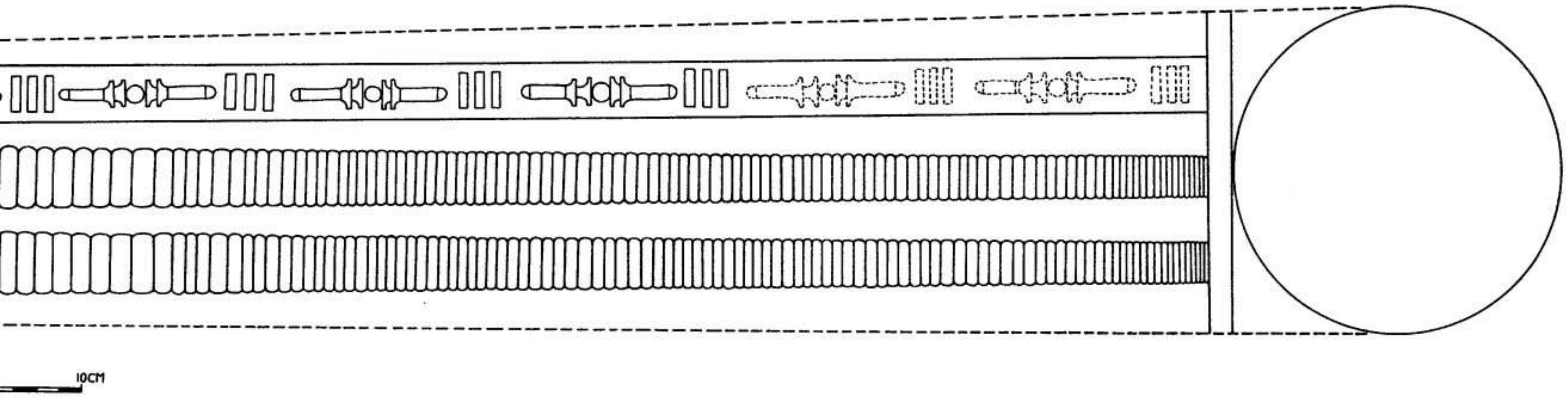


Fig. 46


10CM

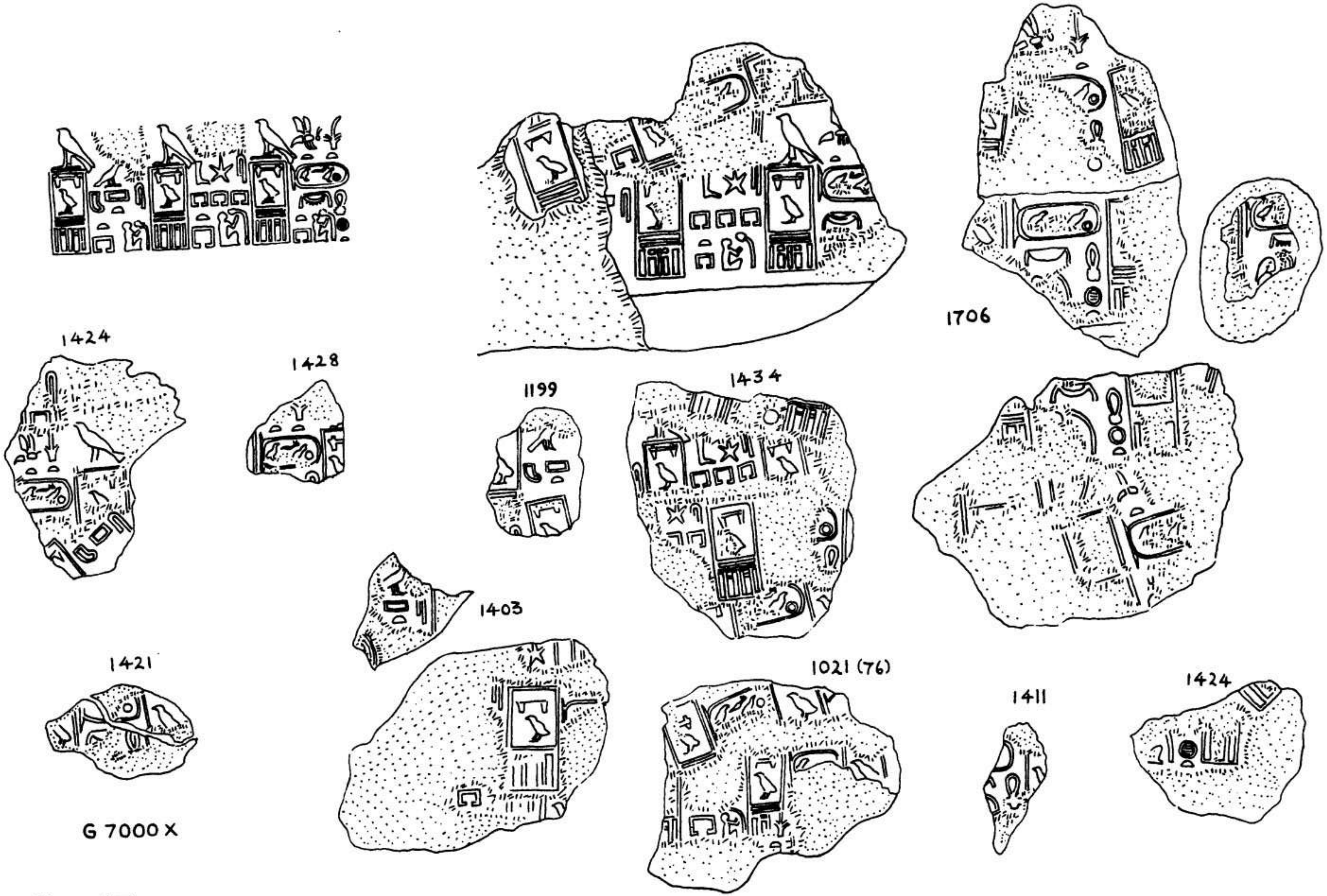

1706
1424
1428
1199
1434
1403
1421
1021 (76)
1411
1424
G 7000 X

Fig. 47

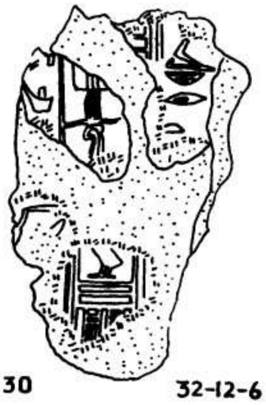

G 2130
32-12-6

Fig. 48

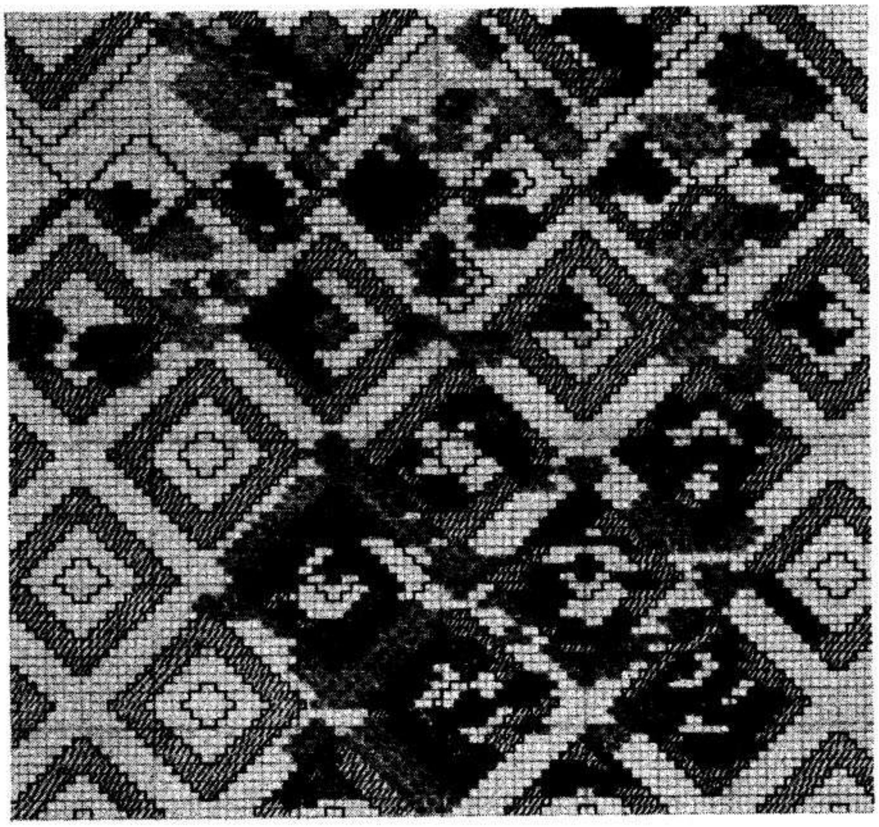
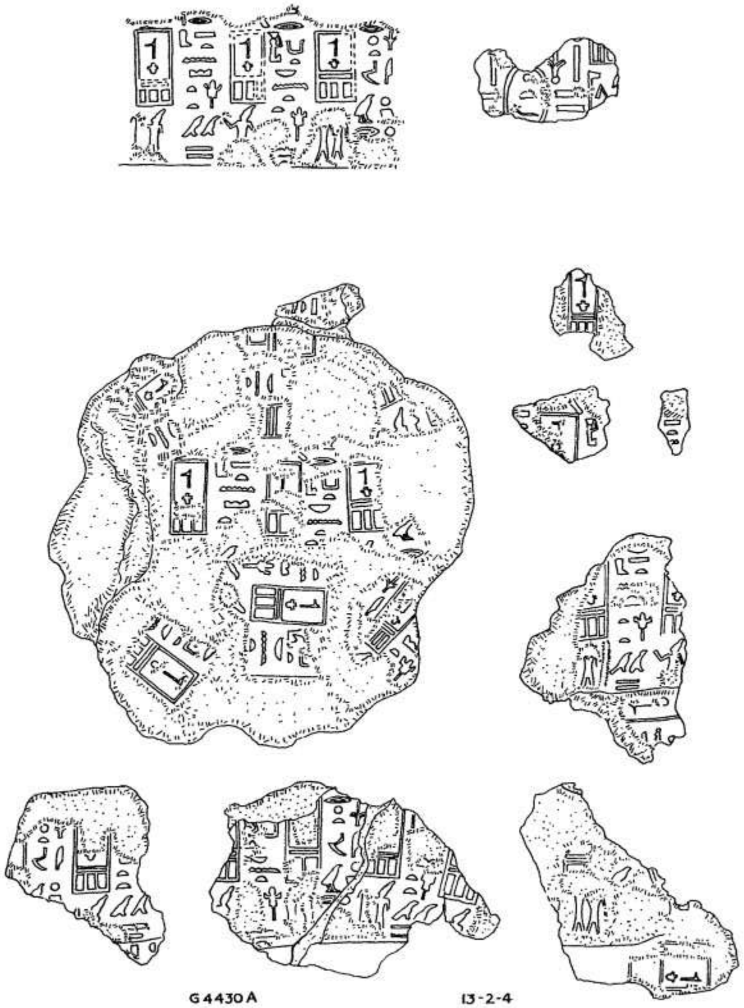
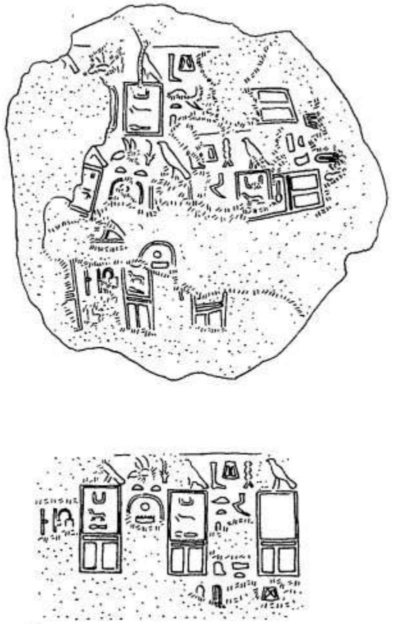


Fig. 48a



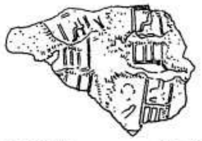
G4430A 13-2-4

Fig. 49

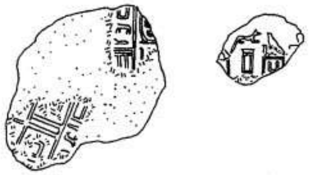


G5190A 12-10-21

Fig. 50



G5080B 33-2-223



G1457A 34-12-8

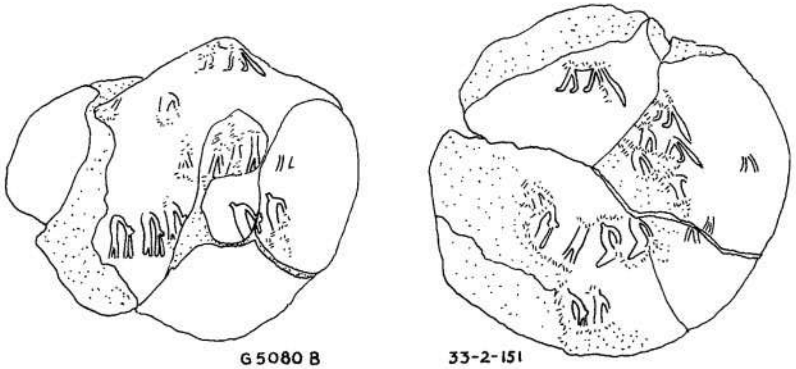

G 5080 B
33-2-151

Fig. 51

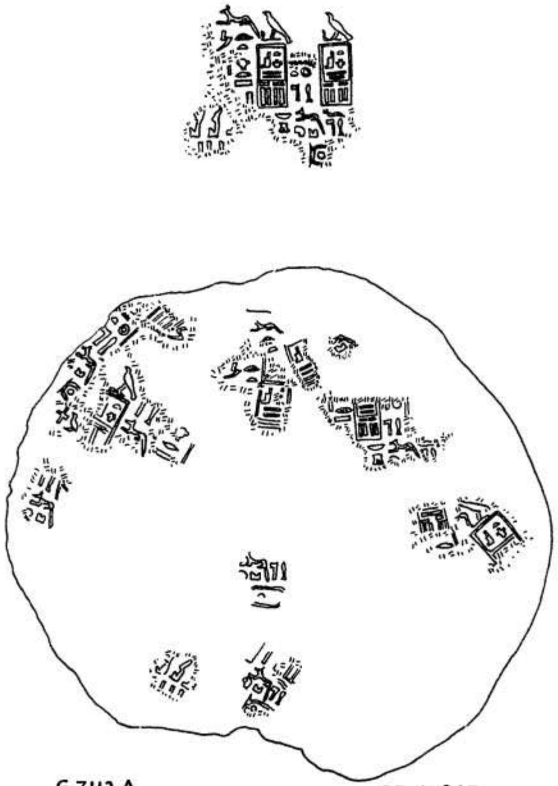

G 7112 A
25-1-963

Fig. 52

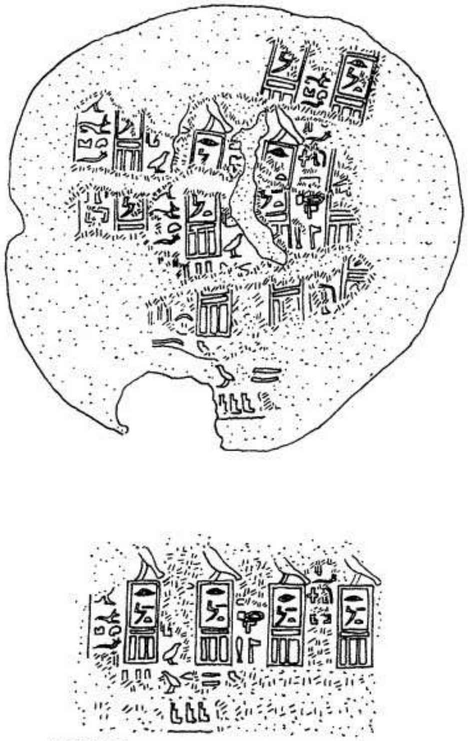

G 4631 B
14-1-34

Fig. 53

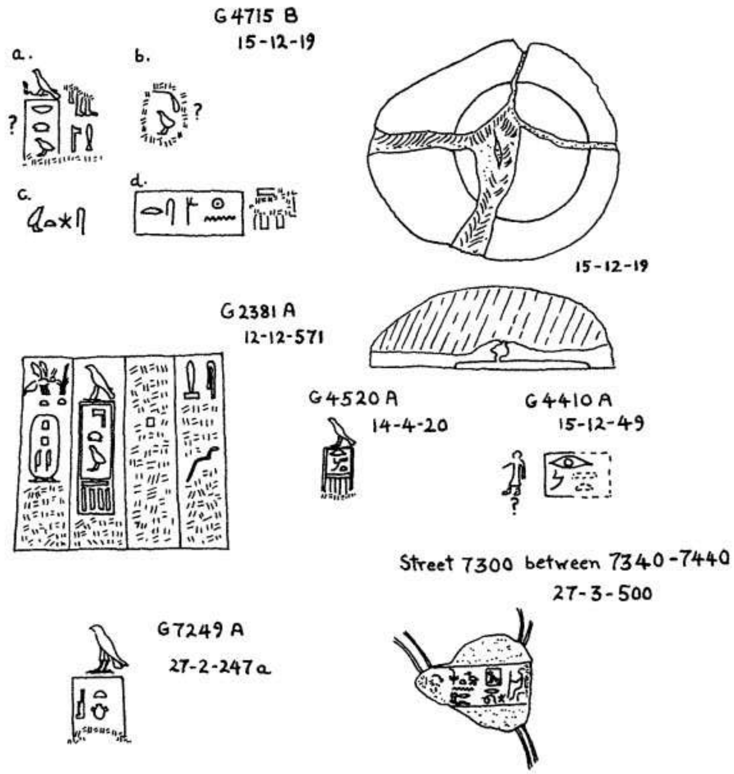

G 4715 B
15-12-19
a.
b.
?
?
c.
d.
15-12-19
G 2381 A
12-12-571
G 4520 A
14-4-20
G 4410 A
15-12-49
?
Street 7300 between 7340-7440
27-3-500
G 7249 A
27-2-247a

Fig. 54

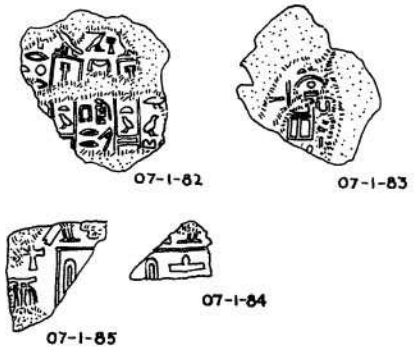

07-1-82
07-1-83
07-1-85
07-1-84

Fig. 56

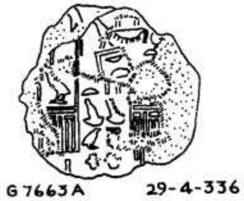

G 7663 A
29-4-336

Fig. 55

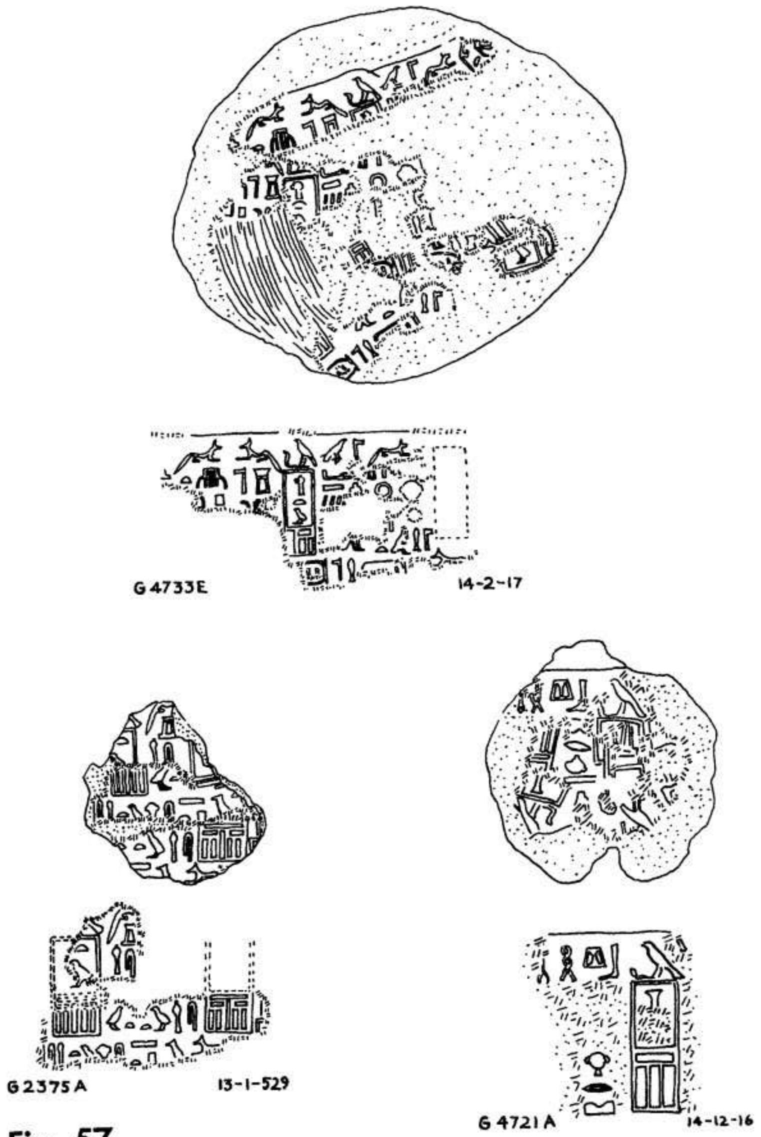

G 4733 E
14-2-17
G 2375 A
13-1-529
G 4721 A
14-12-16

Fig. 57

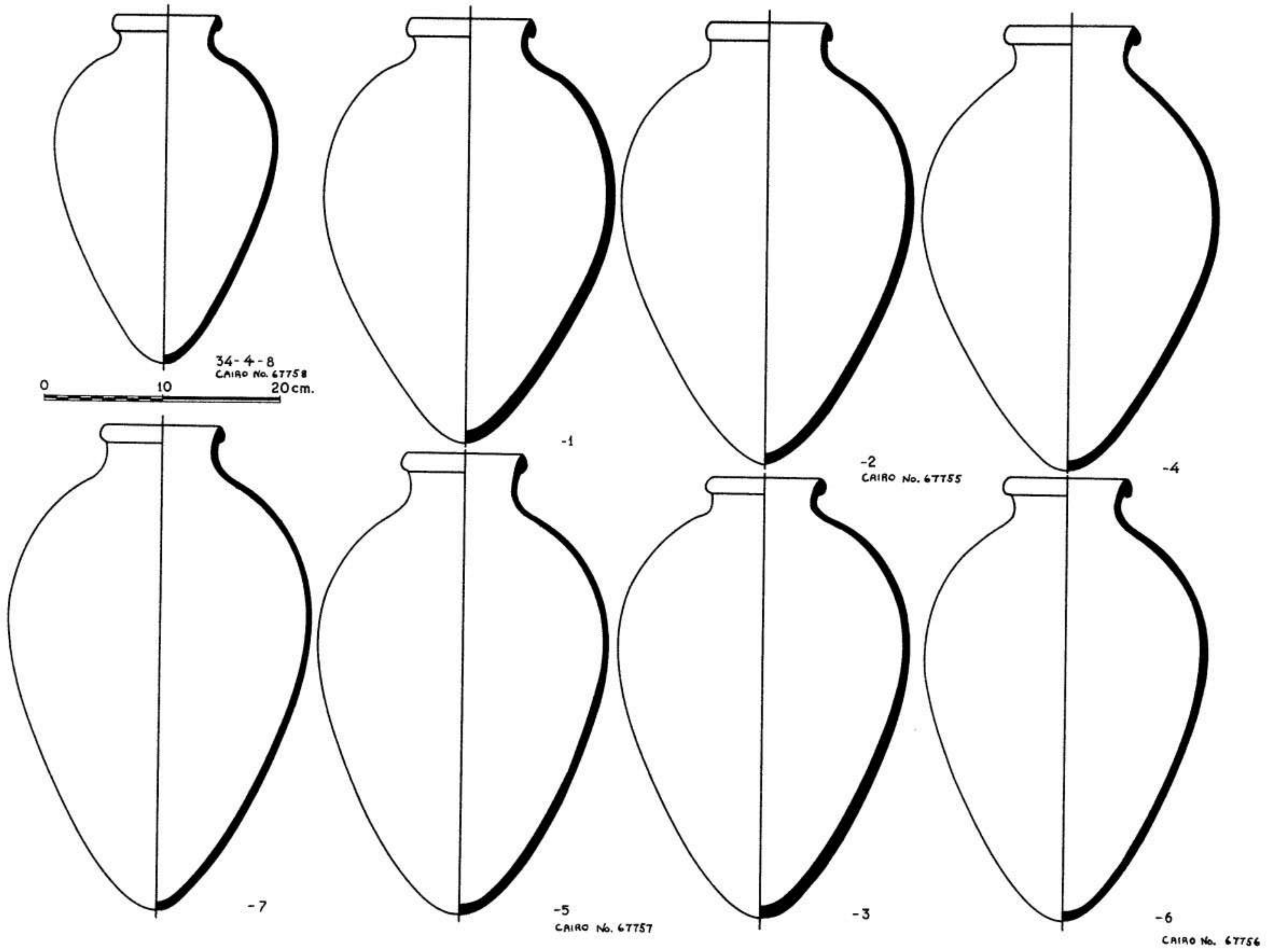

34-4-8
CAIRO No. 67758
0
10
20cm.
-1
-2
CAIRO No. 67755
-4
-7
-5
CAIRO No. 67757
-3
-6
CAIRO No. 67756

Fig. 58

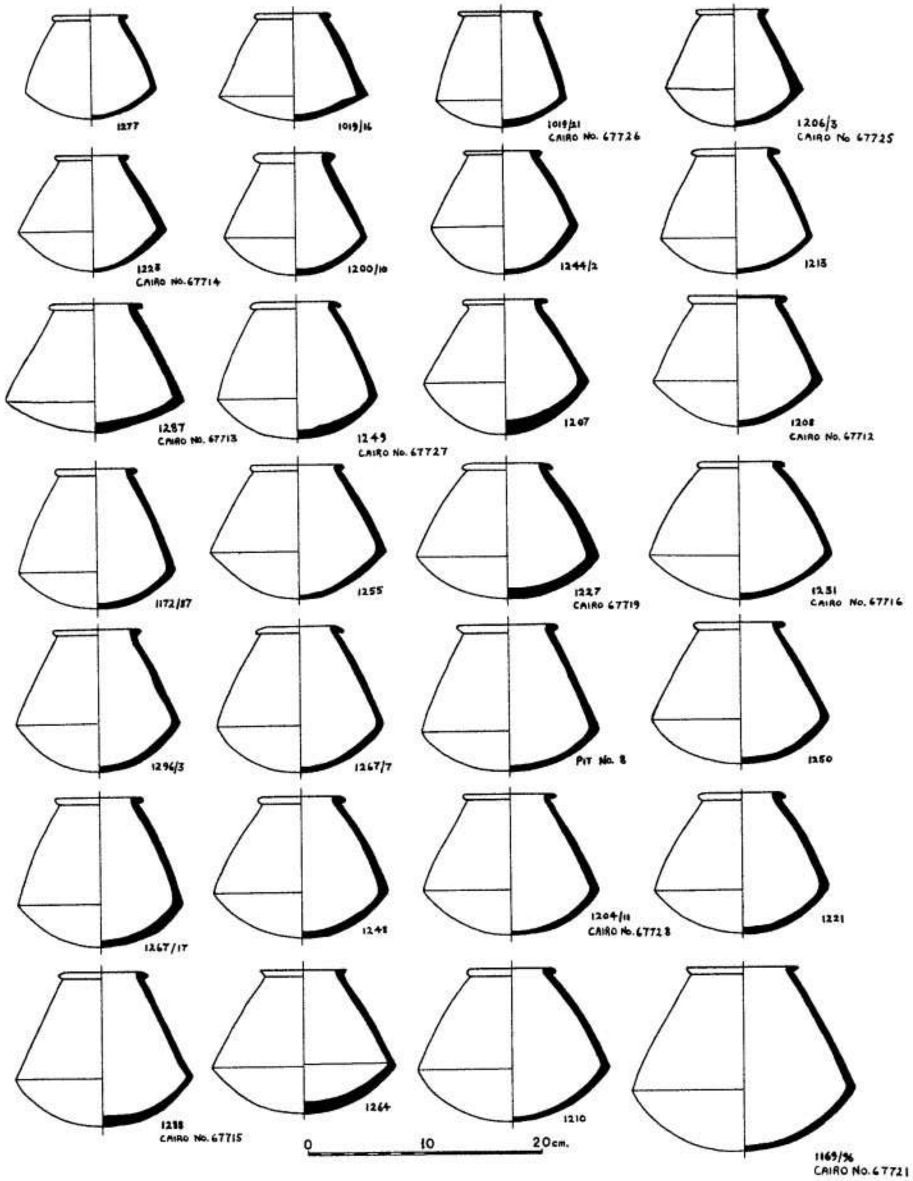

1277
1019/16
1019/21
CAIRO No. 67726
1206/3
CAIRO No 67725
1228
CAIRO No. 67714
1200/10
1244/2
1218
1287
CAIRO No. 67713
1249
CAIRO No. 67727
1207
1208
CAIRO No. 67712
1172/87
1255
1227
CAIRO 67719
1231
CAIRO No. 67716
1296/3
1267/7
PIT No. 8
1250
1267/17
1248
1204/11
CAIRO No. 67728
1221
1288
CAIRO No. 67715
1264
1210
0
10
20cm.
1169/96
CAIRO No. 67721

Fig. 59

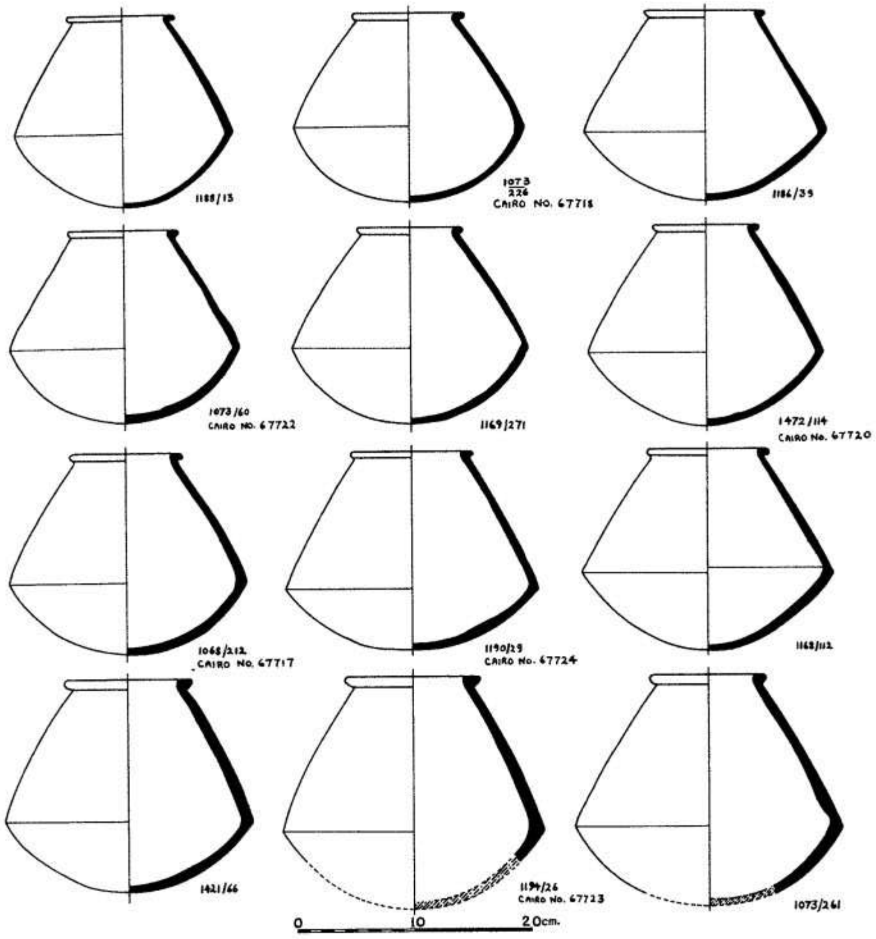

1188/13
1073/226
CAIRO No. 67718
1186/39
1073/60
CAIRO No. 67722
1169/271
1472/114
CAIRO No. 67720
1068/212
CAIRO No. 67717
1190/29
CAIRO No. 67724
1168/112
1421/66
1194/26
CAIRO No. 67723
1073/261
0
10
20cm.

Fig. 60

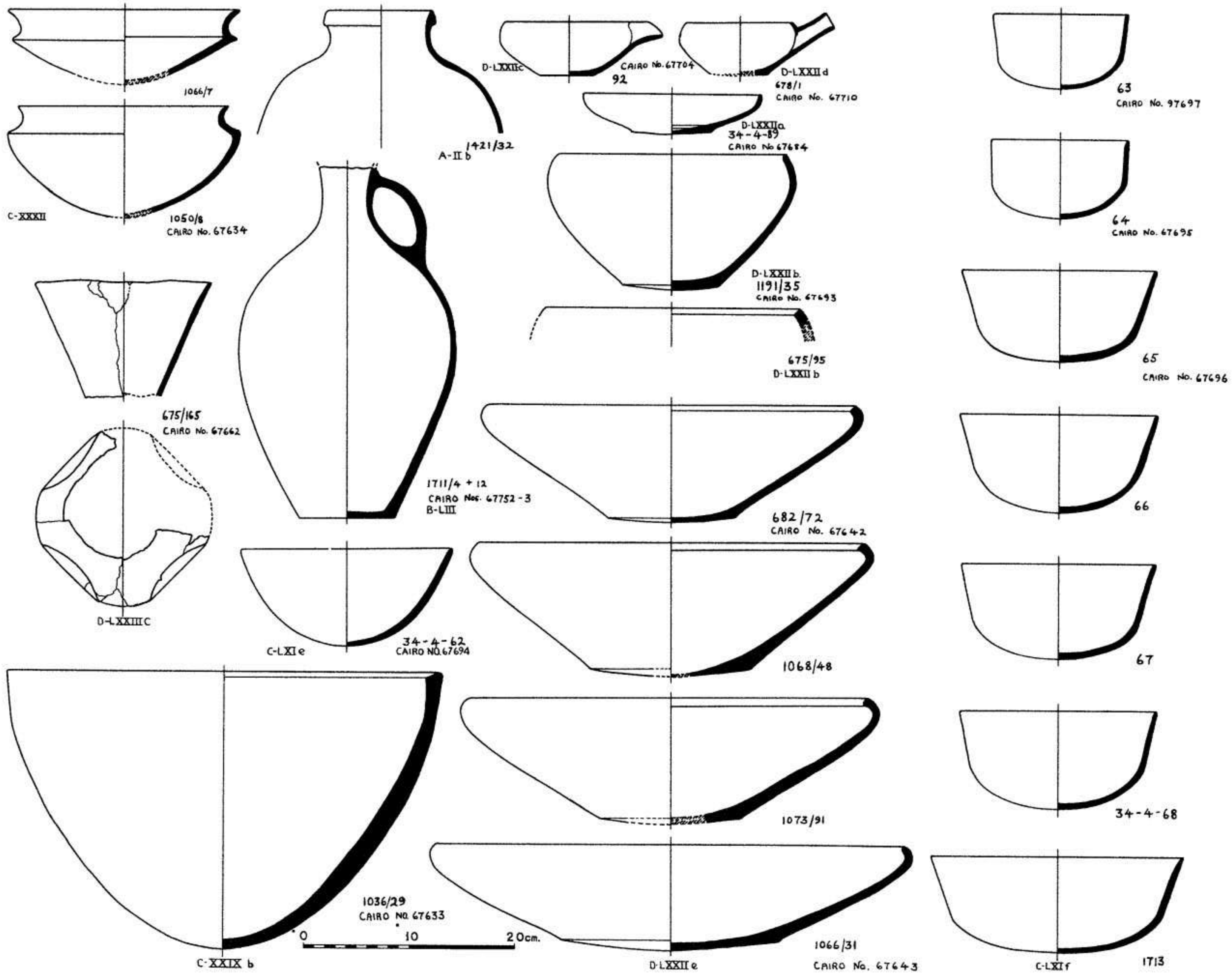

1066/7
C-XXXII
1050/8
CAIRO No. 67634
A-II b
1421/32
D-LXXIIc
CAIRO No. 67704
92
D-LXXII d
678/1
CAIRO No. 67710
D-LXXIIa
34-4-89
CAIRO No 67684
D-LXXII b.
1191/35
CAIRO No. 67693
675/95
D-LXXII b
63
CAIRO No. 97697
64
CAIRO No. 67695
65
CAIRO No. 67696
675/165
CAIRO No. 67662
D-LXXIII C
1711/4 + 12
CAIRO Nos. 67752-3
B-LIII
682/72
CAIRO No. 67642
66
C-LXI e
34-4-62
CAIRO NO.67694
1068/48
67
1073/91
34-4-68
1036/29
CAIRO NO. 67633
0
10
20cm.
C-XXIX b
1066/31
D-LXXII e
CAIRO No. 67643
C-LXI f
1713

Fig. 61

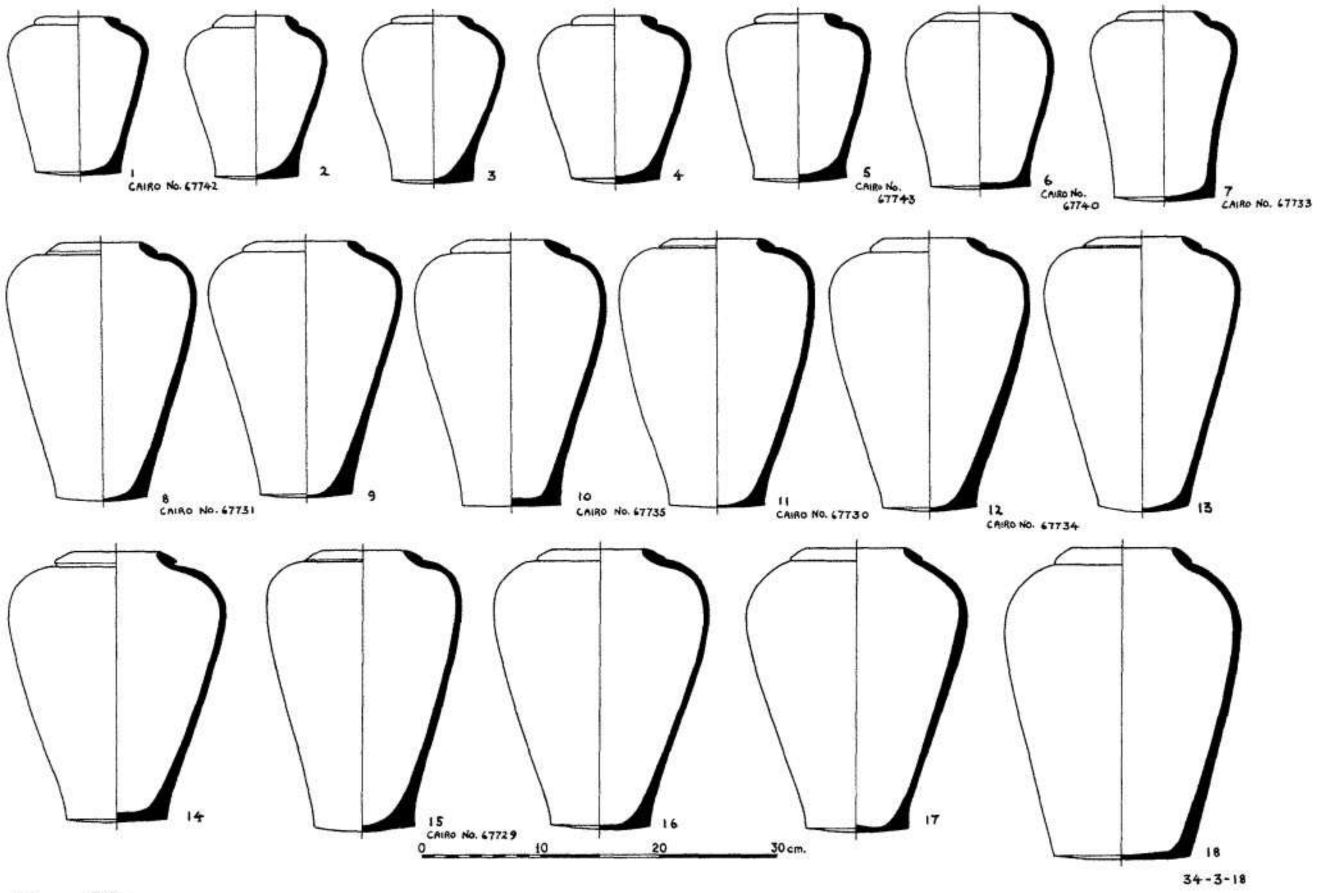

CAIRO No. 67742
CAIRO No. 67743
CAIRO No. 67740
CAIRO No. 67733
CAIRO No. 67731
CAIRO No. 67735
CAIRO No. 67730
CAIRO No. 67734
CAIRO No. 67729
30 cm.
34-3-18

Fig. 62

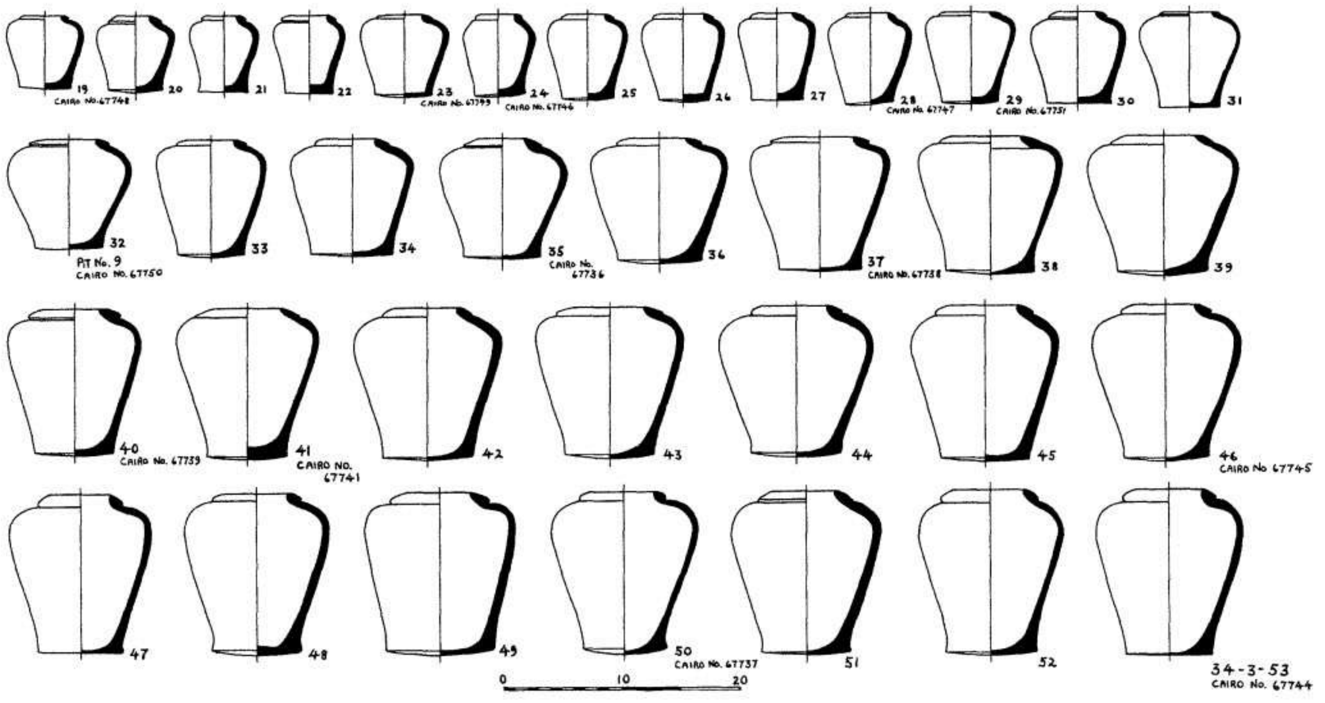

CAIRO No. 67748
CAIRO No. 67749
CAIRO No. 67746
CAIRO No. 67747
CAIRO No. 67751
PIT No. 9
CAIRO No. 67750
CAIRO No. 67736
CAIRO No. 67738
CAIRO No. 67739
CAIRO NO. 67741
CAIRO No 67745
CAIRO No. 67737
34-3-53
CAIRO No. 67744

Fig. 63

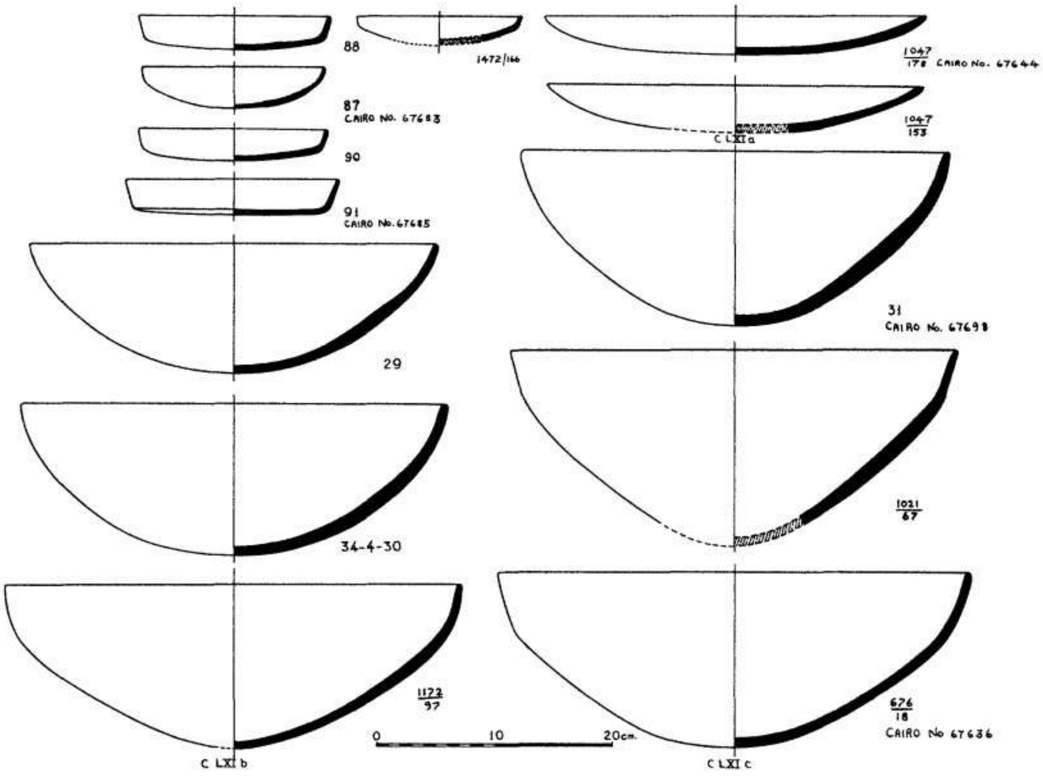

88
1472/166
1047/178 CAIRO No. 67644
87
CAIRO No. 67683
1047/153
C LXI a
90
91
CAIRO No. 67685
31
CAIRO No. 67698
29
1021/67
34-4-30
1172/97
0
10
20cm.
676/18
CAIRO No 67636
C LXI b
C LXI c

Fig. 64

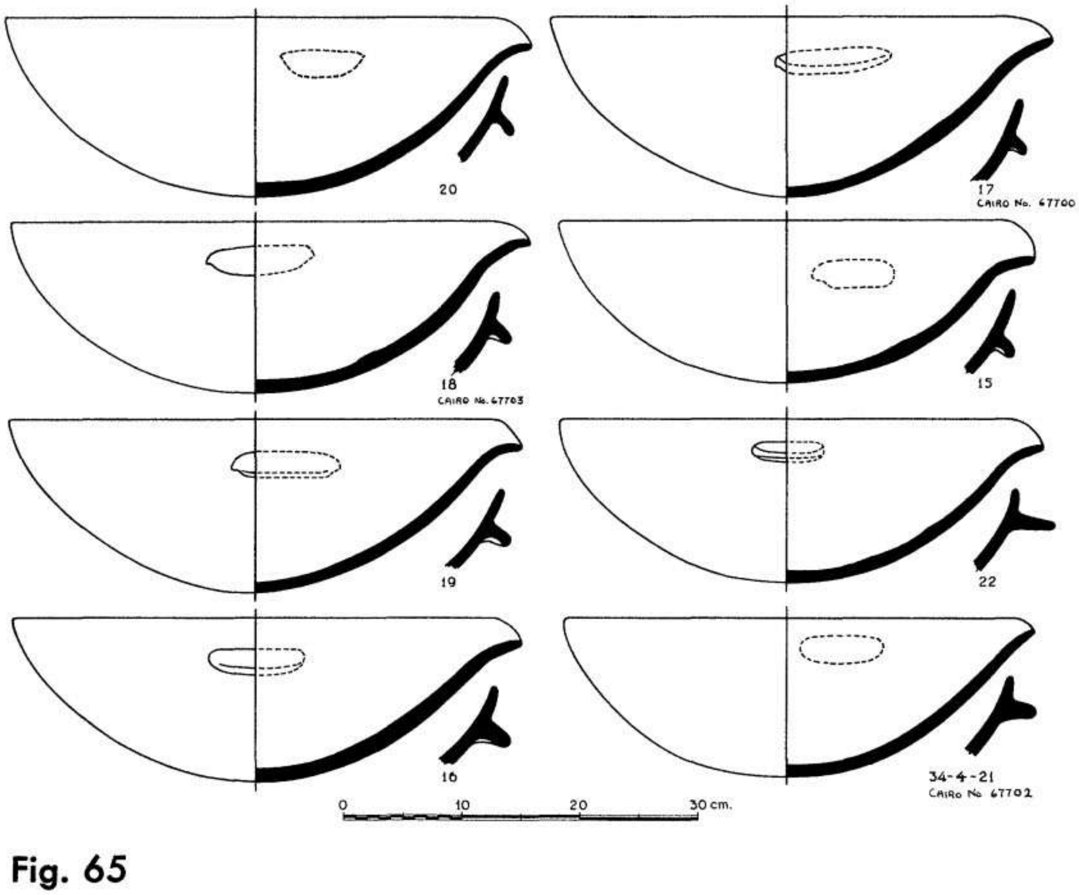

CAIRO No. 67700
CAIRO No. 67703
34-4-21
CAIRO No 67702
30 cm.

Fig. 65

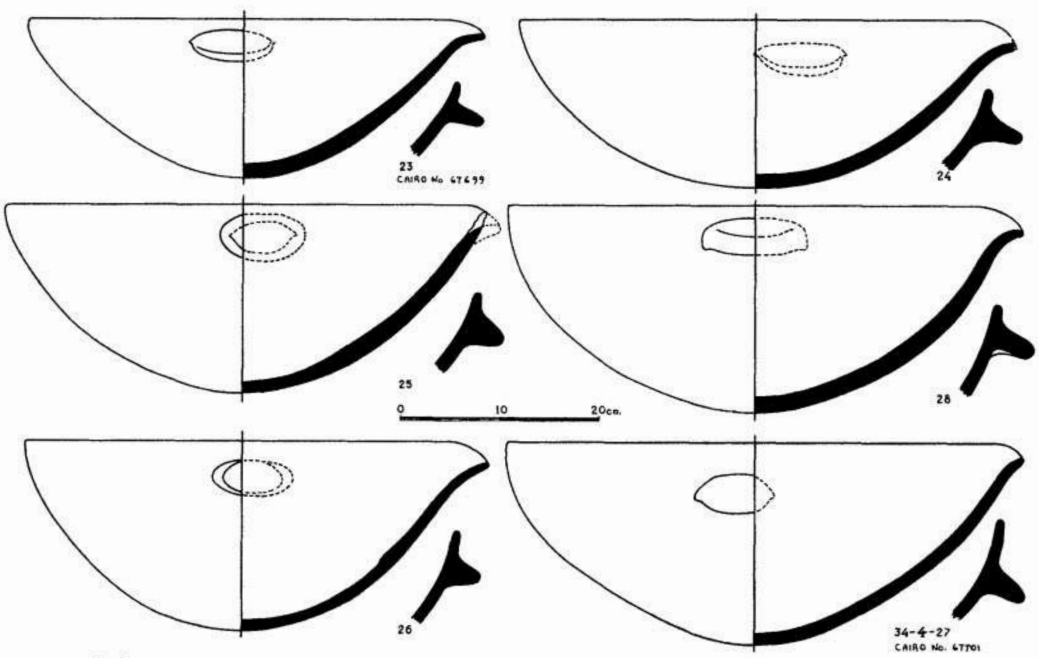

CAIRO No. 67499
20cm.
34-4-27
CAIRO No. 67701

Fig. 66

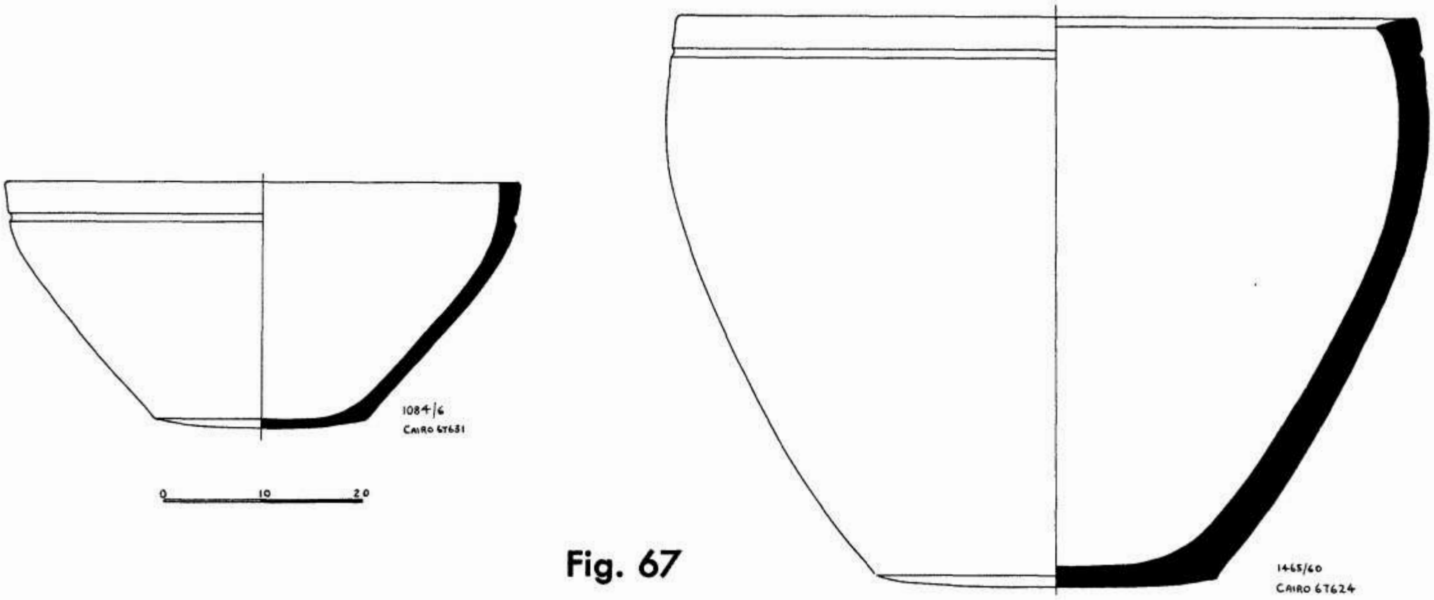

1084/6
CAIRO 67631
0
10
20
1465/60
CAIRO 67624

Fig. 67

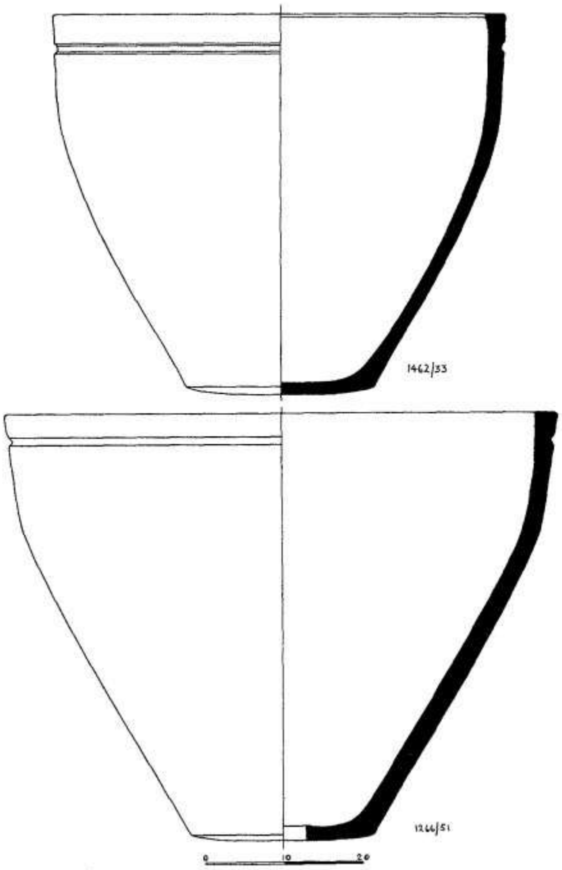

1462/33
1266/51
0
10
20

Fig. 68

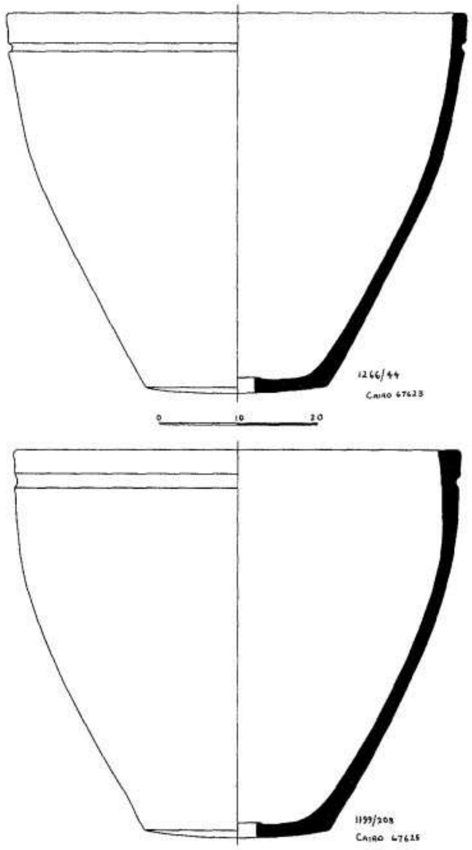

1266/44
CAIRO 67623
0
10
20
1199/208
CAIRO 67625

Fig. 69

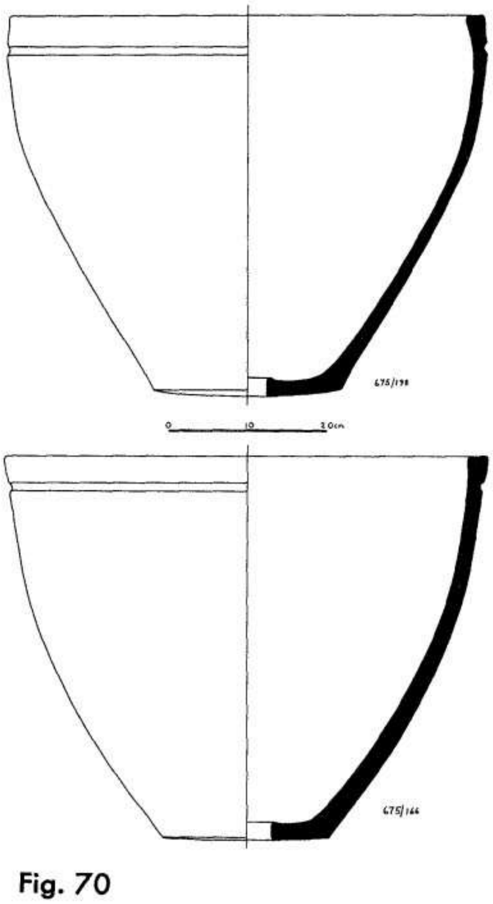

675/198
0
10
20cm
675/166

Fig. 70

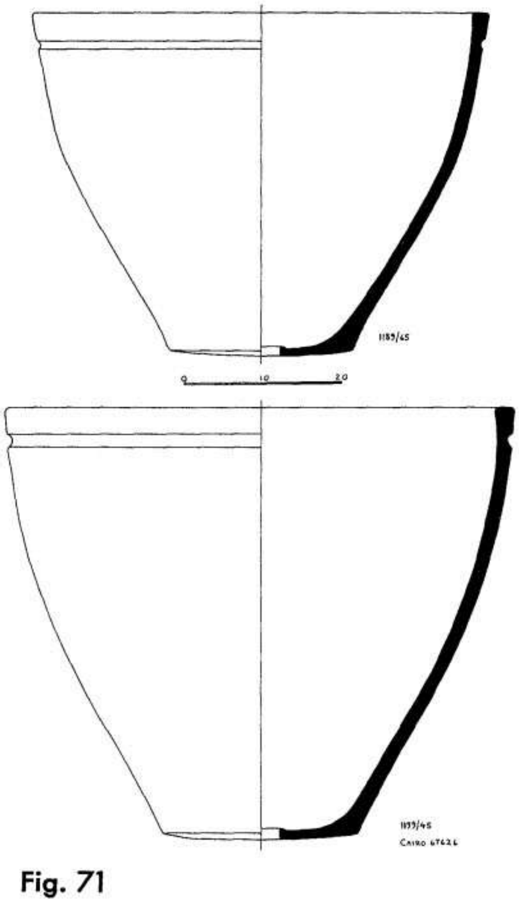

1199/65
0
10
20
1199/45
CAIRO 67626

Fig. 71

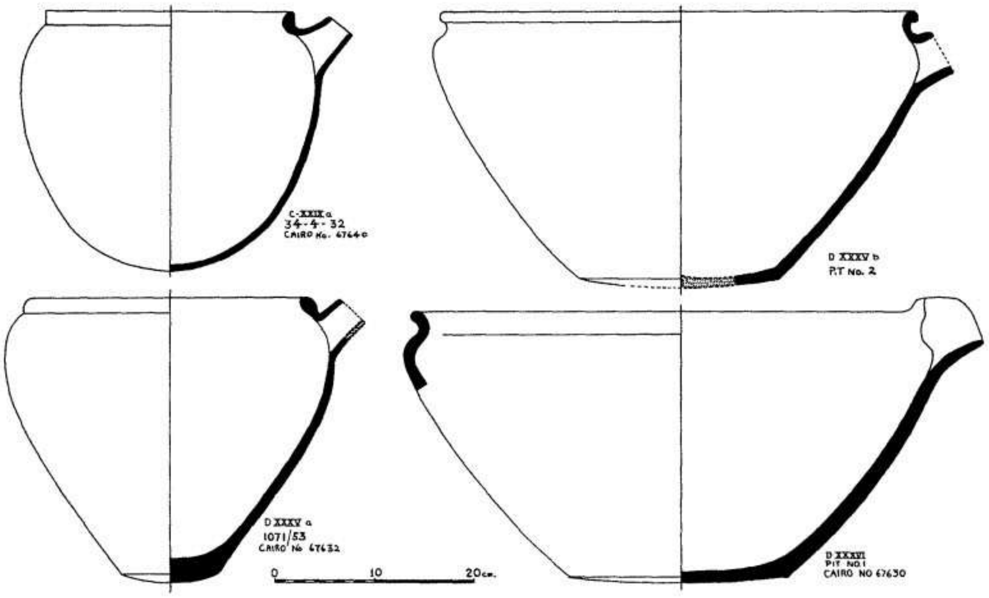

C-XXIX a
34-4-32
CAIRO No. 67640
D XXXV b
P.T No. 2
D XXXV a
1071/53
CAIRO No 67632
0
10
20cm.
D XXXVI
PIT NO I
CAIRO NO 67630

Fig. 72

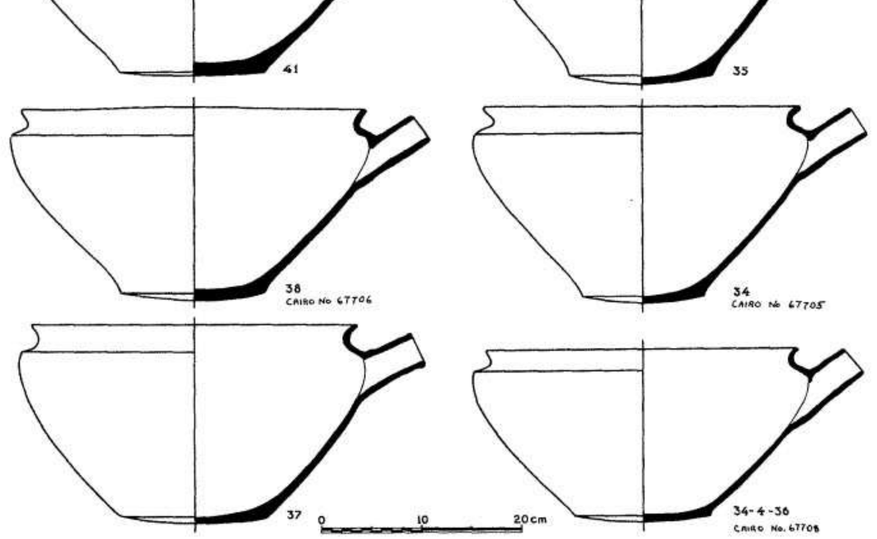

41
35
38
CAIRO No 67706
34
CAIRO No 67705
37
0
10
20cm
34-4-38
CAIRO No. 67708

Fig. 73

8-3-37 N.M.

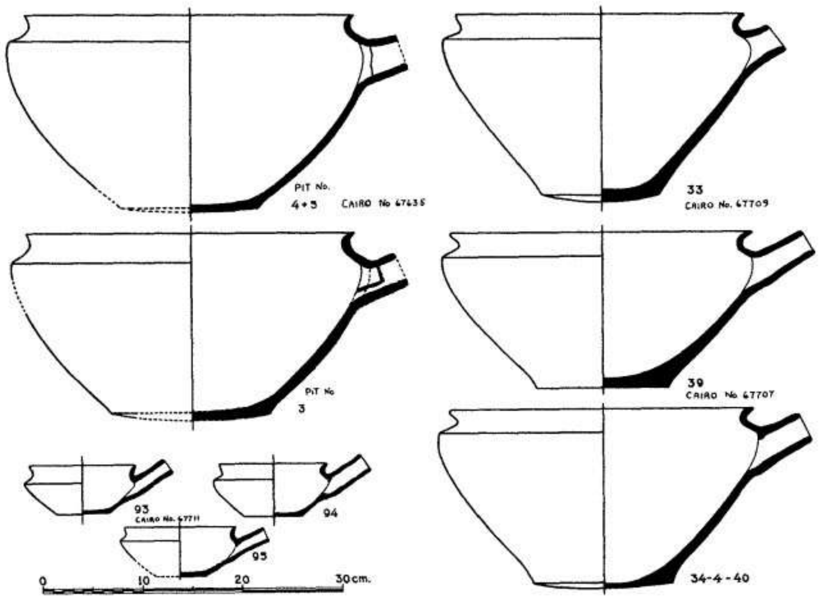

PIT No.
4+5
CAIRO No 67635
33
CAIRO No. 67709
PIT No
3
39
CAIRO No 67707
93
CAIRO No. 67711
94
95
0
10
20
30cm.
34-4-40

Fig. 74

11-5-37 N.M.

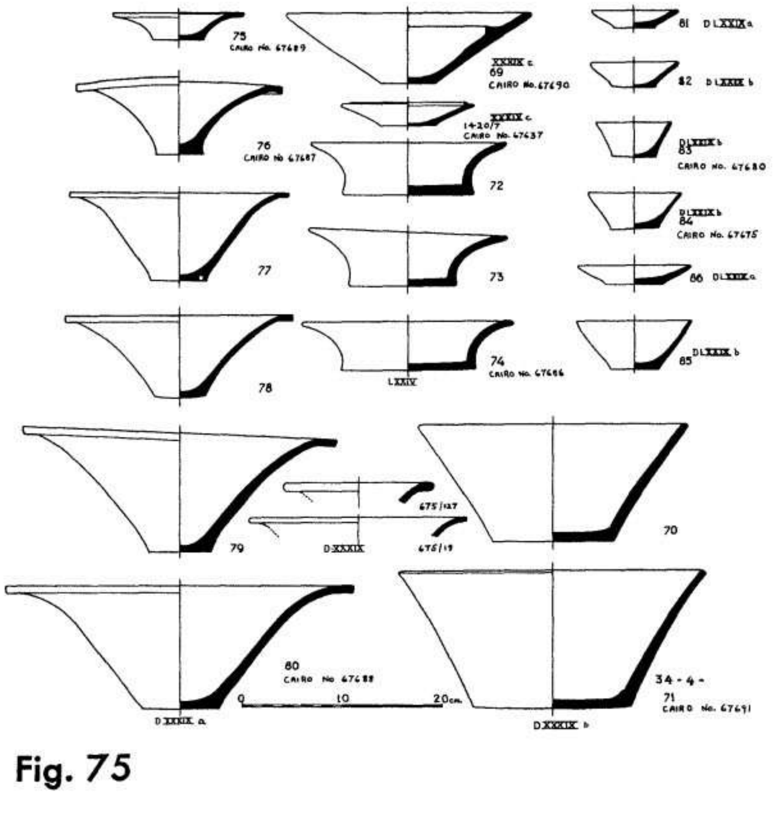

75
CAIRO No. 67689
XXXIX c
69
CAIRO No. 67690
81 DLXXIX a
82 DLXXIX b
XXXIX c
1420/7
CAIRO No. 67637
76
CAIRO No 67687
DLXXIX b
83
CAIRO No. 67680
72
DLXXIX b
84
CAIRO No. 67675
77
73
86 DLXXIX a
74
CAIRO No. 67686
LXXIV
85 DLXXIX b
78
675/127
675/19
DXXXIX
79
70
80
CAIRO No 67688
0
10
20cm.
DXXXIX a
34-4-
71
CAIRO No. 67691
DXXXIX b

Fig. 75

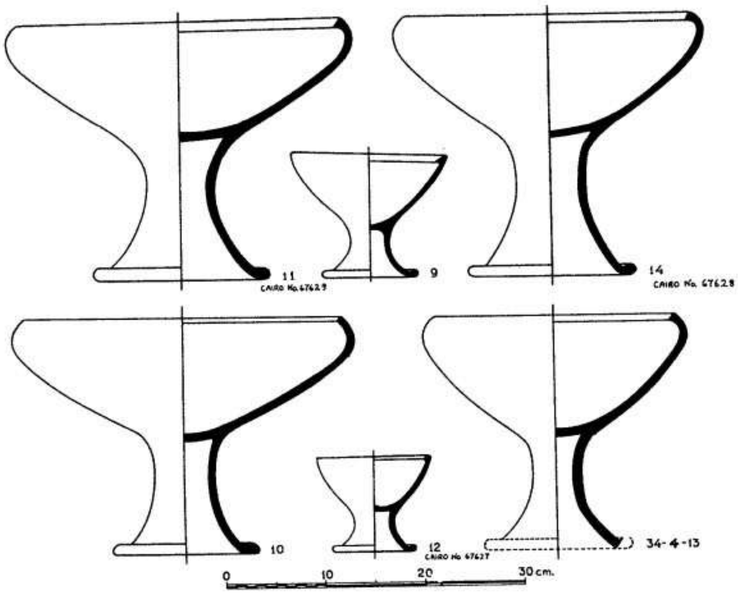

11
CAIRO No. 67629
9
14
CAIRO No. 67628
10
12
CAIRO No 67627
34-4-13
0
10
20
30 cm.

Fig. 76

4-5-37 N.M.

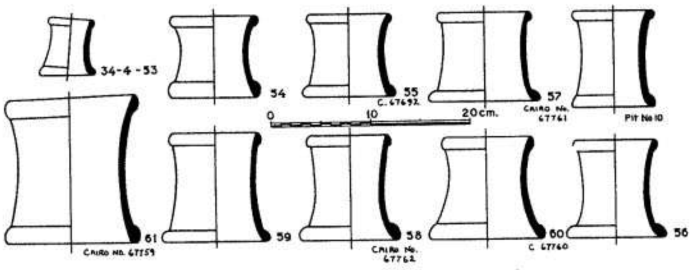

34-4-53
54
55
C. 67692
57
CAIRO No.
67761
PIT No 10
0
10
20 cm.
61
CAIRO NO. 67759
59
58
CAIRO No.
67762
60
C 67760
56

Fig. 77

13-5-37 N.M

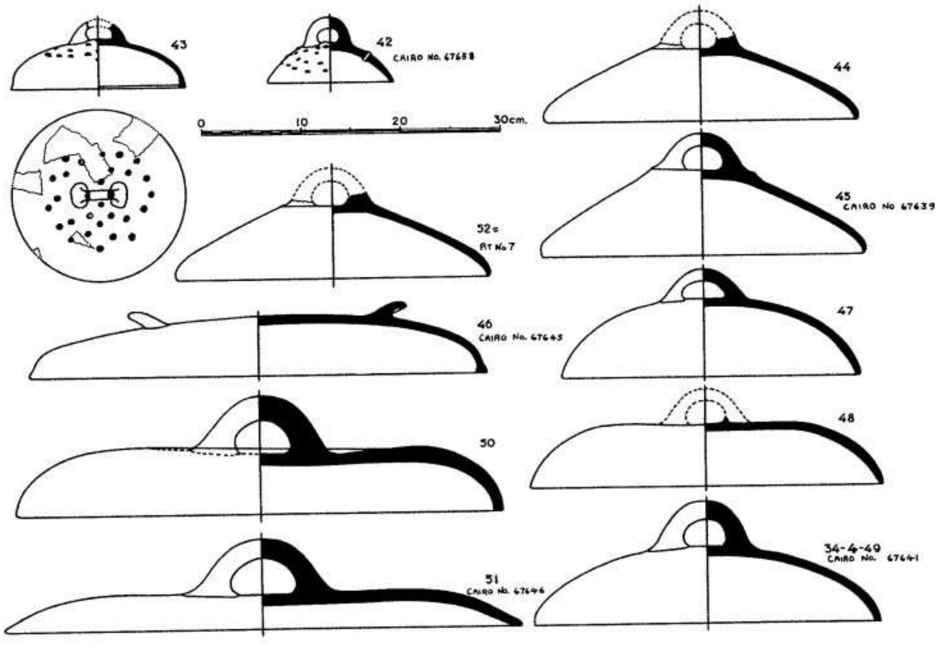

43
42
CAIRO NO. 67638
44
0
10
20
30cm.
52 =
PIT No 7
45
CAIRO No 67639
46
CAIRO No. 67645
47
50
48
51
CAIRO No. 67646
34-4-49
CAIRO No. 67641

Fig. 78

7-5-37 N.M.

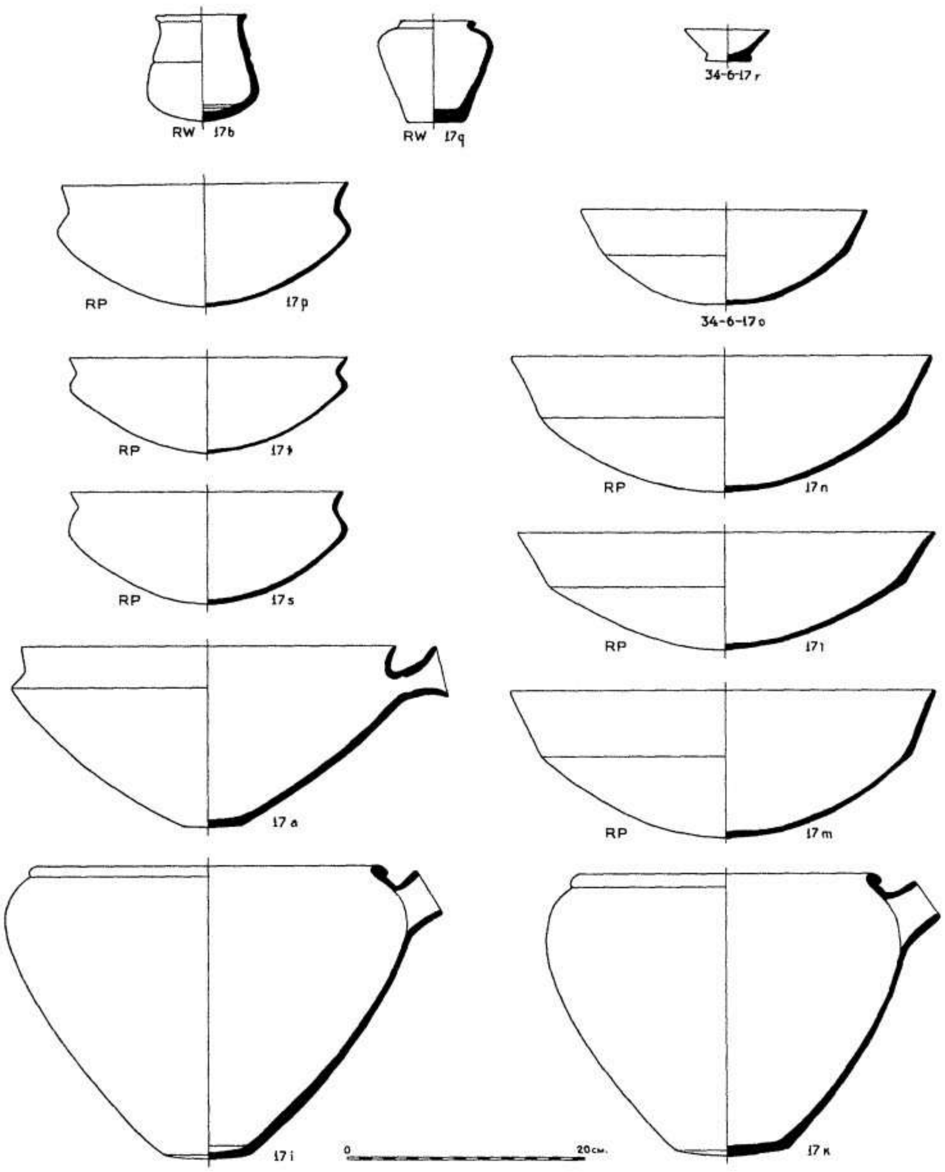

RW 17b
RW 17q
34-6-17r
RP 17p
34-6-17o
RP 17t
RP 17n
RP 17s
RP 17l
17a
RP 17m
17i
0 20cm.
17k

Fig. 79

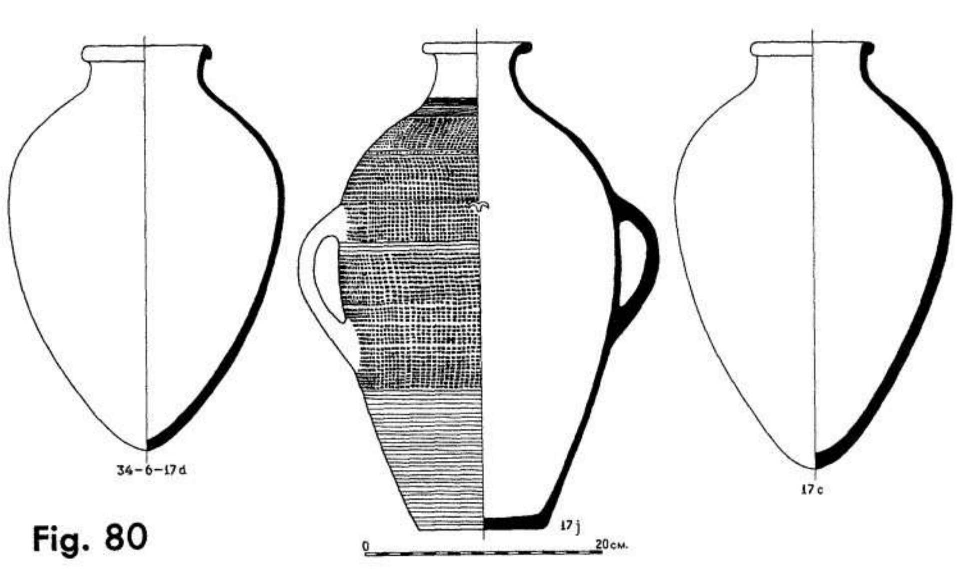

34-6-17d
17j
0 20cm.
17c

Fig. 80

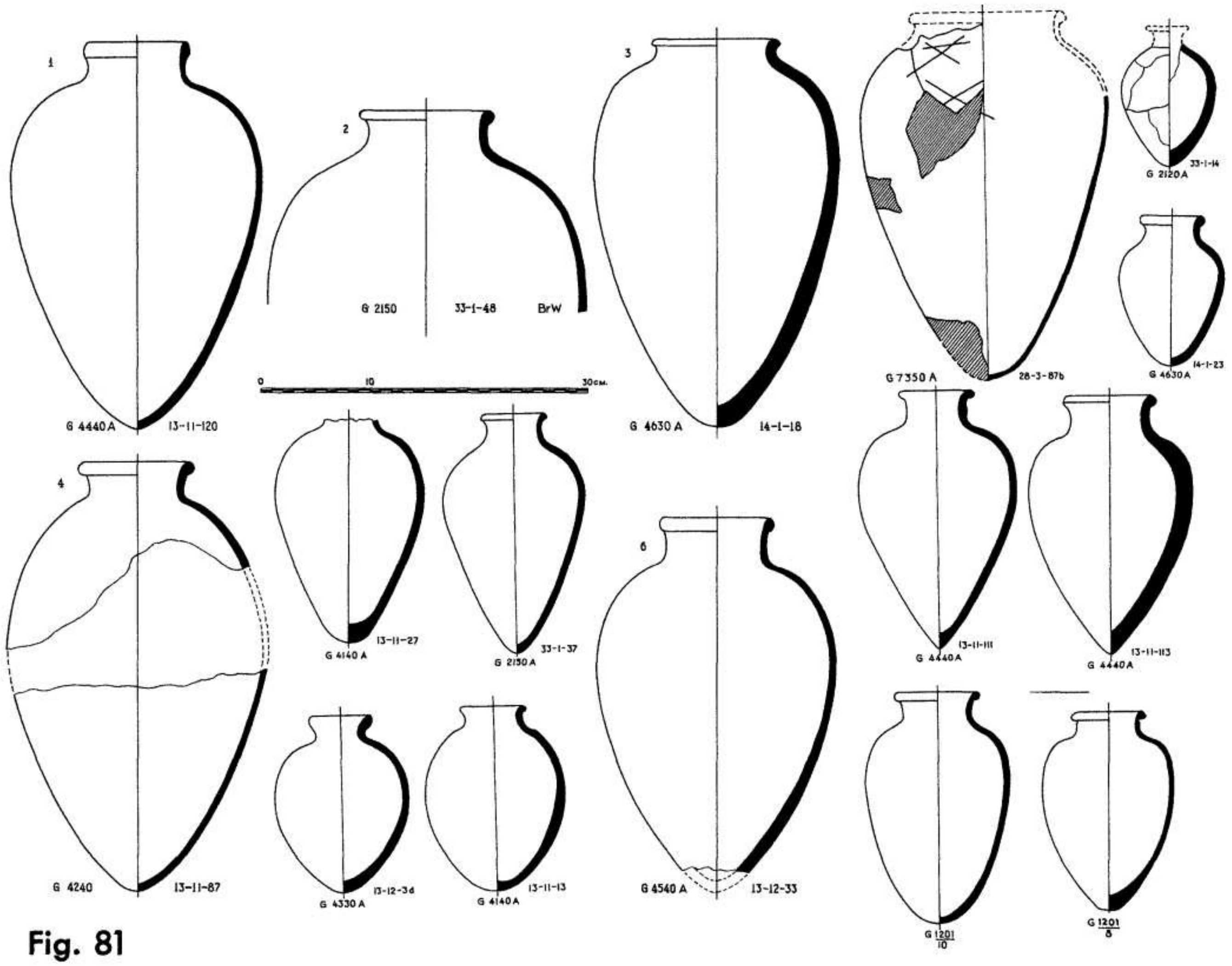

1
G 4440 A
13-11-120
2
G 2150
33-1-48
BrW
0
10
30 CM.
3
G 4630 A
14-1-18
G 7350 A
28-3-87b
G 2120 A
33-1-14
G 4630 A
14-1-23
4
G 4240
13-11-87
G 4140 A
13-11-27
G 2130 A
33-1-37
G 4330 A
13-12-3d
G 4140 A
13-11-13
6
G 4540 A
13-12-33
G 4440 A
13-11-111
G 4440 A
13-11-113
G 1201/10
G 1201/8

Fig. 81

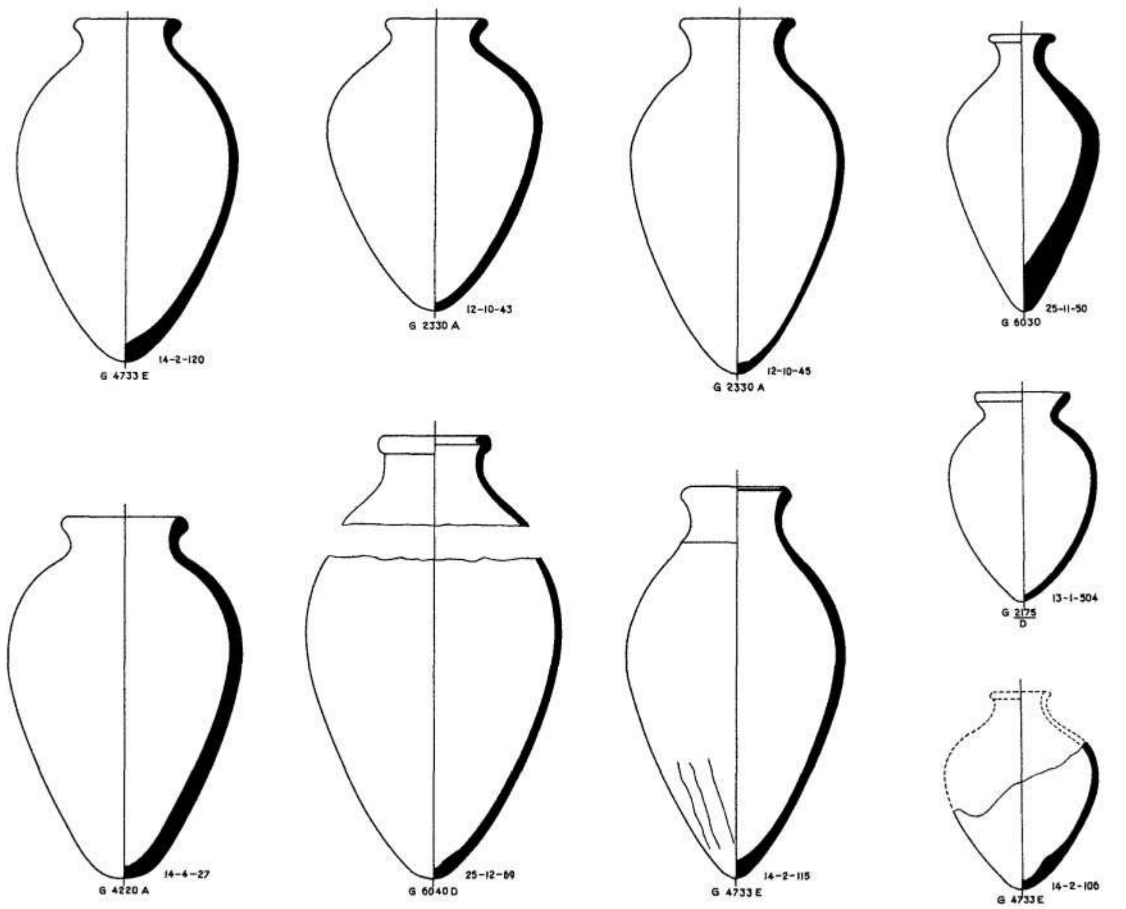

G 4733 E
14-2-120
G 2330 A
12-10-43
G 2330 A
12-10-45
G 6030
25-11-50
G 2175/D
13-1-504
G 4220 A
14-4-27
G 6040 D
25-12-89
G 4733 E
14-2-115
G 4733 E
14-2-106
0
20 CM.

Fig. 82

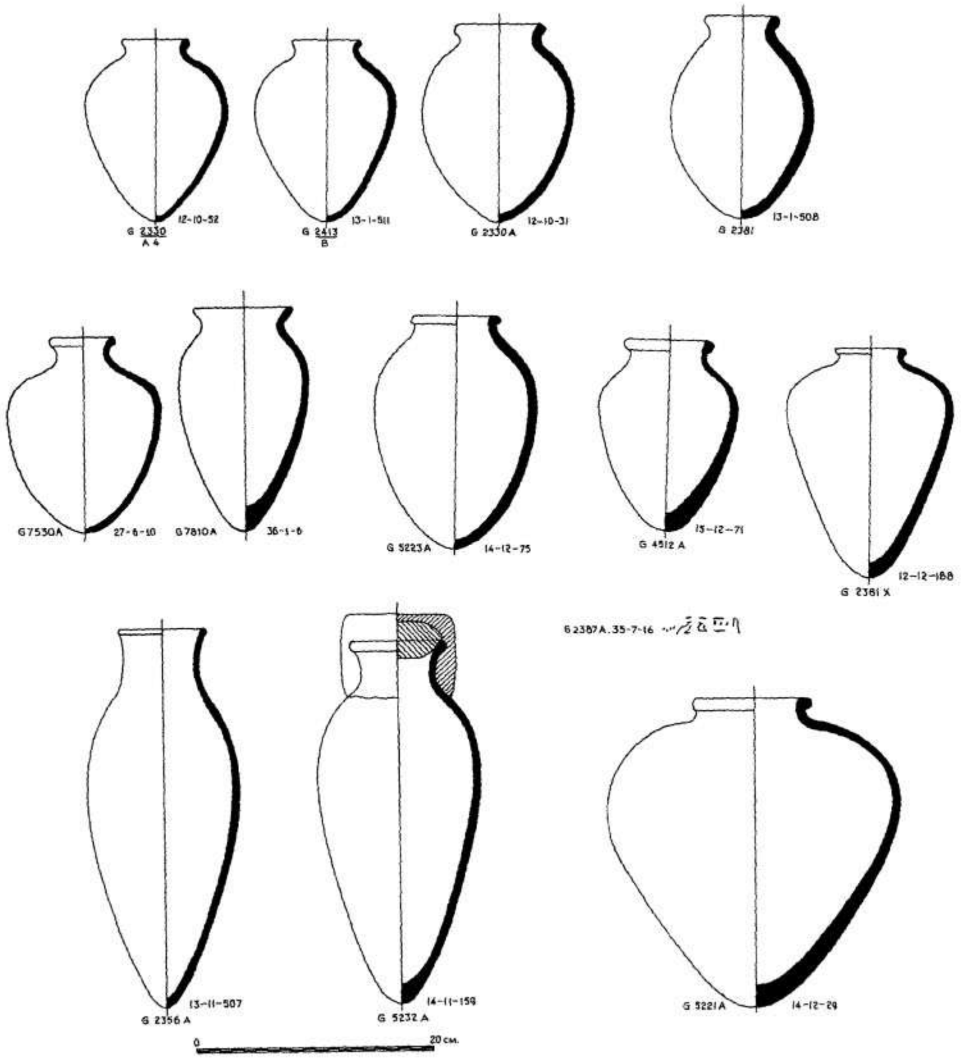

G 2330
A 4
12-10-52
G 2413
B
13-1-511
G 2330 A
12-10-31
G 2381
13-1-508
G7530A
27-6-10
G7810A
36-1-6
G 5223 A
14-12-75
G 4512 A
15-12-71
G 2381 X
12-12-188
G 2387 A. 35-7-16
G 2356 A
13-11-507
G 5232 A
14-11-159
G 5221 A
14-12-29
0
20 cm.

Fig. 83

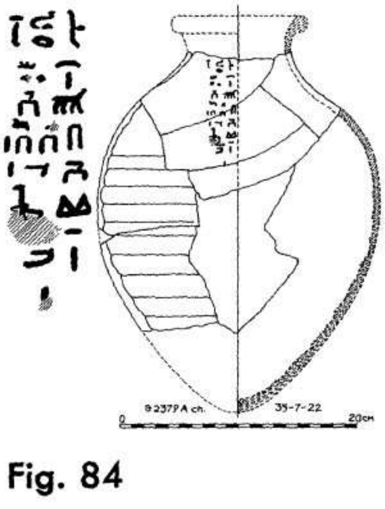

G 2379 A ch.
35-7-22
0
20cm

Fig. 84

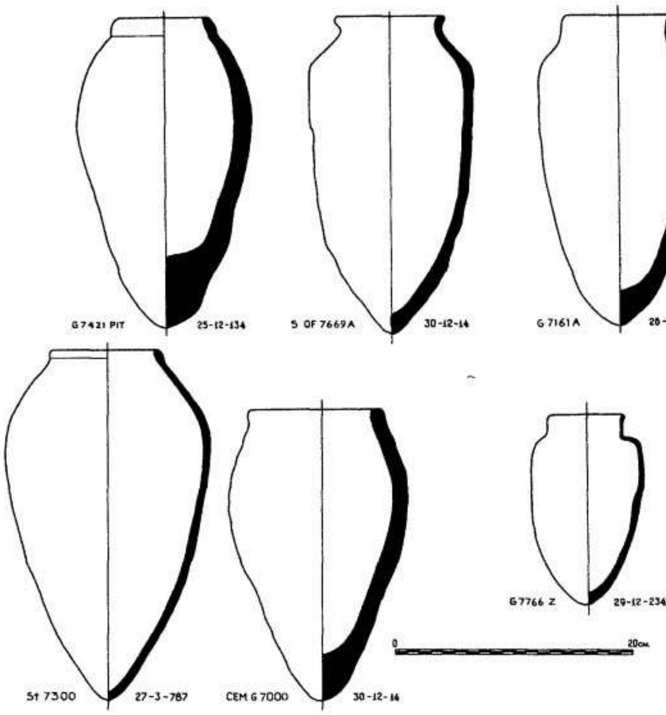

G 7421 PIT
25-12-134
S OF 7669A
30-12-14
G 7161 A
28-3-22
St 7300
27-3-787
CEM G 7000
30-12-16
G 7766 Z
29-12-234
0
20CM.

Fig. 85

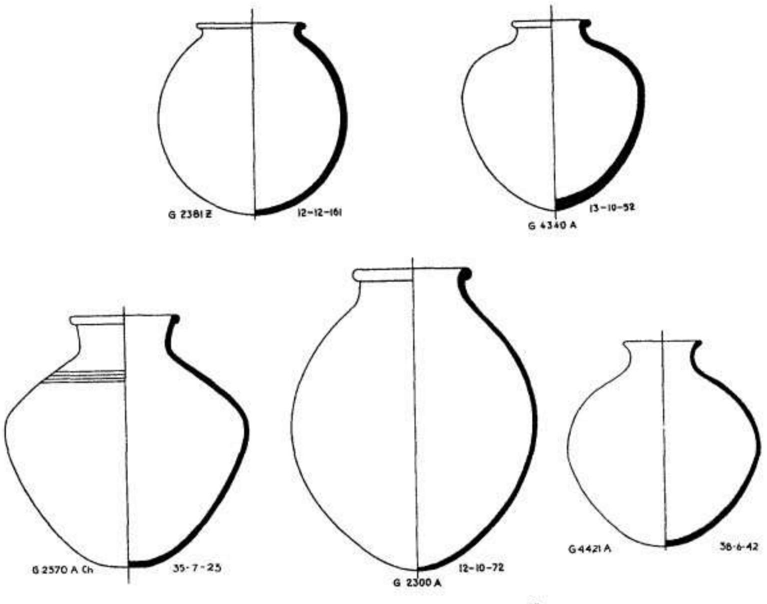

G 2381 Z
12-12-161
G 4340 A
13-10-52
G 2570 A Ch
35-7-25
G 2300 A
12-10-72
G 4421 A
38-6-42
0
20 CM.

Fig. 86

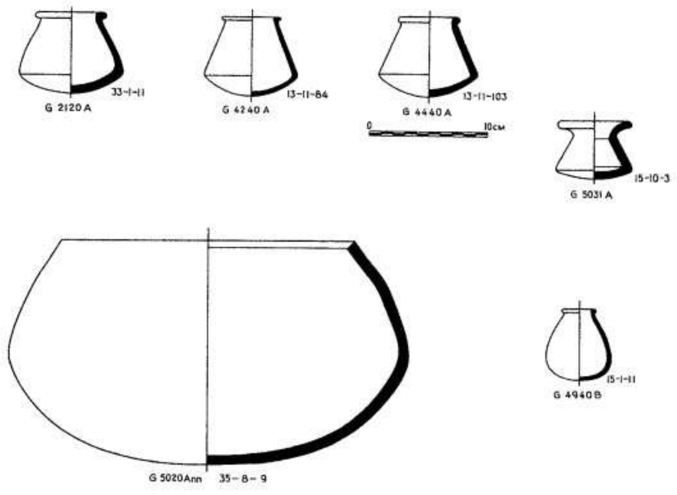

33-1-11
G 2120 A
13-11-84
G 4240 A
13-11-103
G 4440 A
0
10cm
15-10-3
G 5031 A
15-1-11
G 4940 B
G 5020Ann
35-8-9

Fig. 87

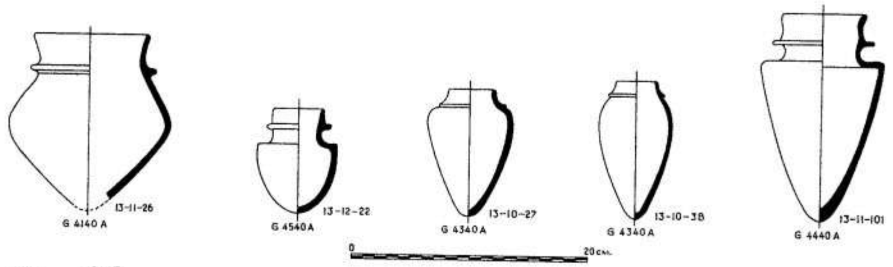

13-11-26
G 4140 A
13-12-22
G 4540 A
13-10-27
G 4340 A
13-10-38
G 4340 A
13-11-101
G 4440 A
0
20cm.

Fig. 88

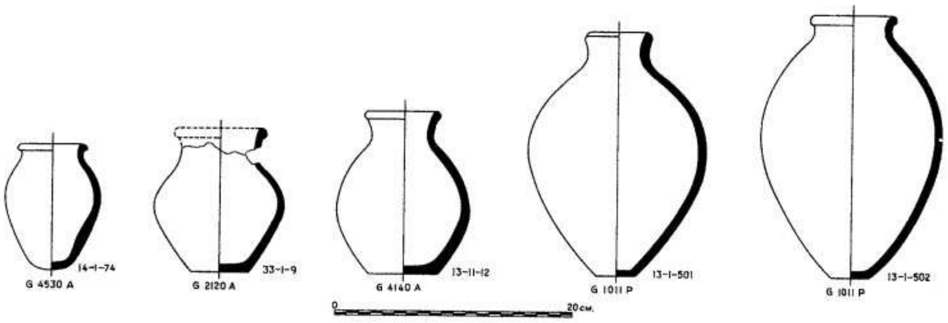

14-1-74
G 4530 A
33-1-9
G 2120 A
13-11-12
G 4140 A
13-1-501
G 1011 P
13-1-502
G 1011 P
0
20cm.

Fig. 89

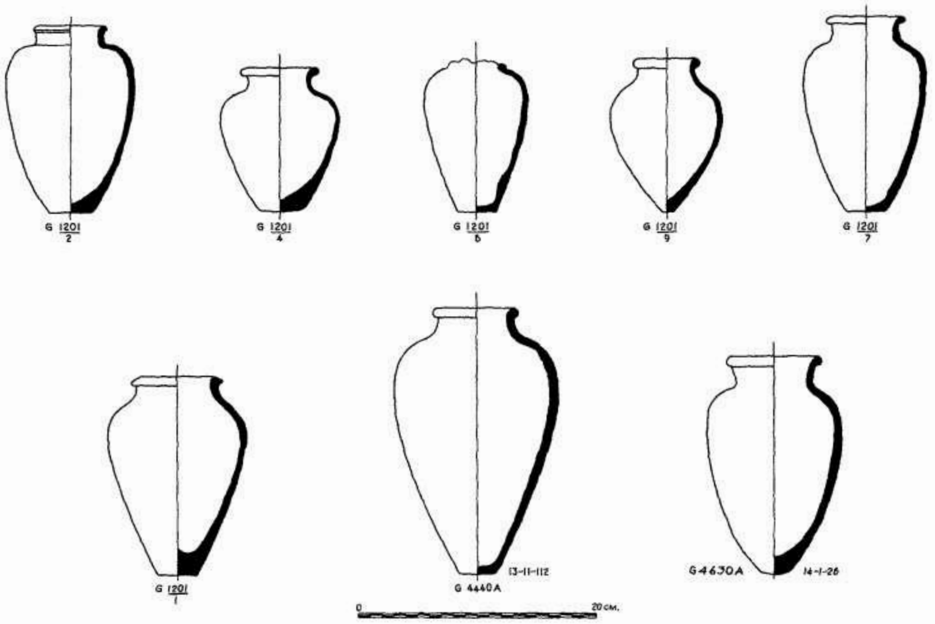

G 1201/2
G 1201/4
G 1201/6
G 1201/9
G 1201/7
G 1201/1
13-11-112
G 4440 A
G 4630 A
14-1-26
0
20 CM.

Fig. 90

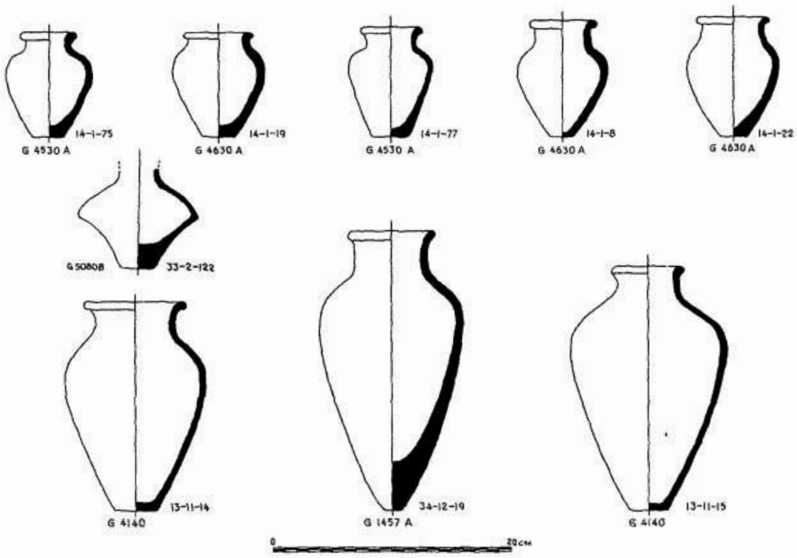

14-1-75
G 4530 A
14-1-19
G 4630 A
14-1-77
G 4530 A
14-1-8
G 4630 A
14-1-22
G 4630 A
G 5080 B
33-2-122
13-11-14
G 4140
34-12-19
G 1457 A
13-11-15
G 4140
0
20 CM

Fig. 91

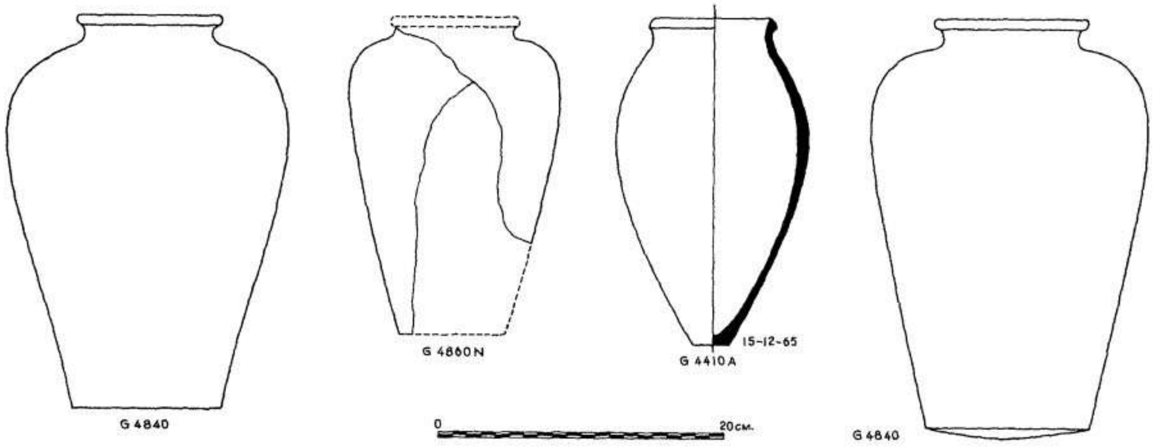

G 4840
G 4860 N
15-12-65
G 4410 A
0
20 CM.
G 4840

Fig. 92

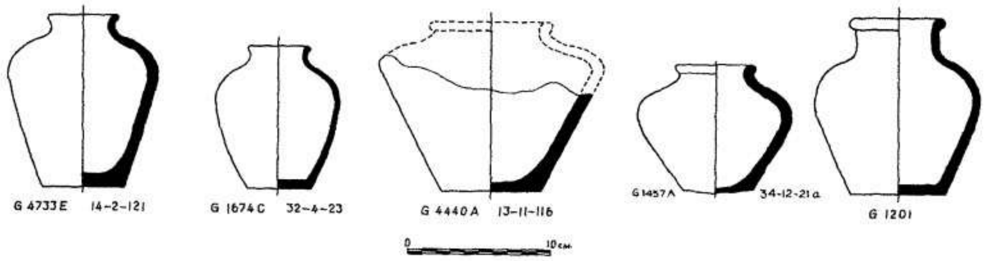

G 4733 E
14-2-121
G 1674 C
32-4-23
G 4440 A
13-11-116
G 1457 A
34-12-21 a
G 1201
0
10 CM.

Fig. 93

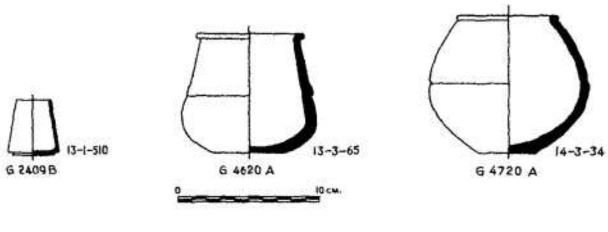

13-1-510
G 2409 B
13-3-65
G 4620 A
0
10 CM.
14-3-34
G 4720 A

Fig. 94

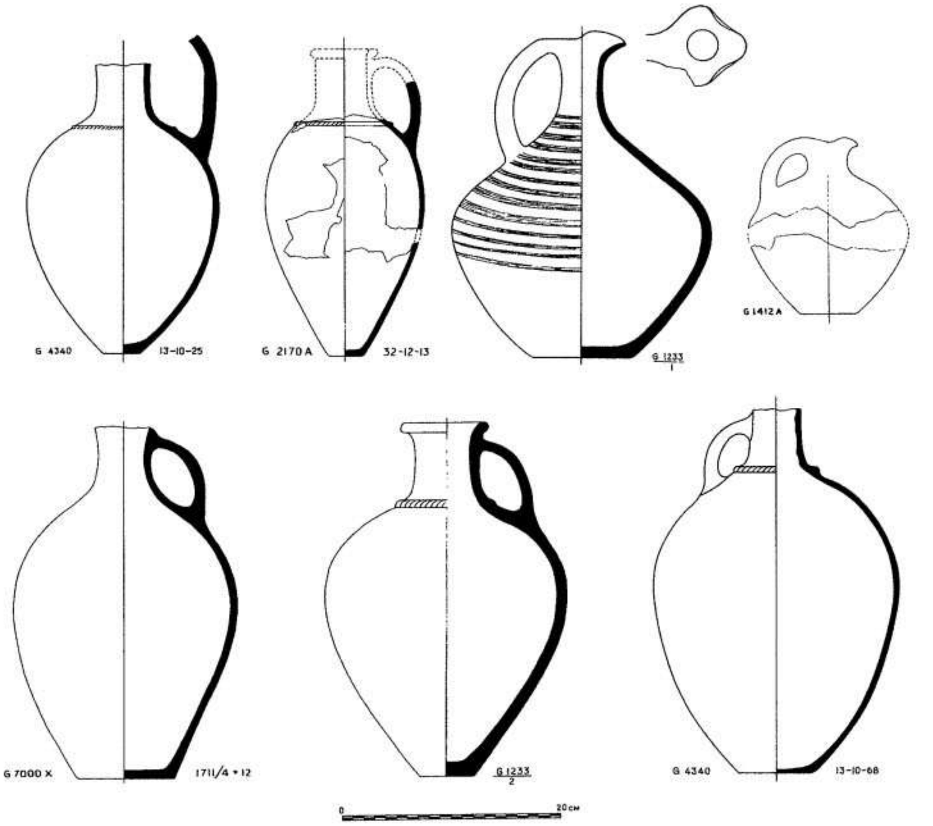

G 4340
13-10-25
G 2170 A
32-12-13
G 1233/1
G 1412 A
G 7000 X
1711/4 + 12
G 1233/2
G 4340
13-10-68
0
20 CM

Fig. 95

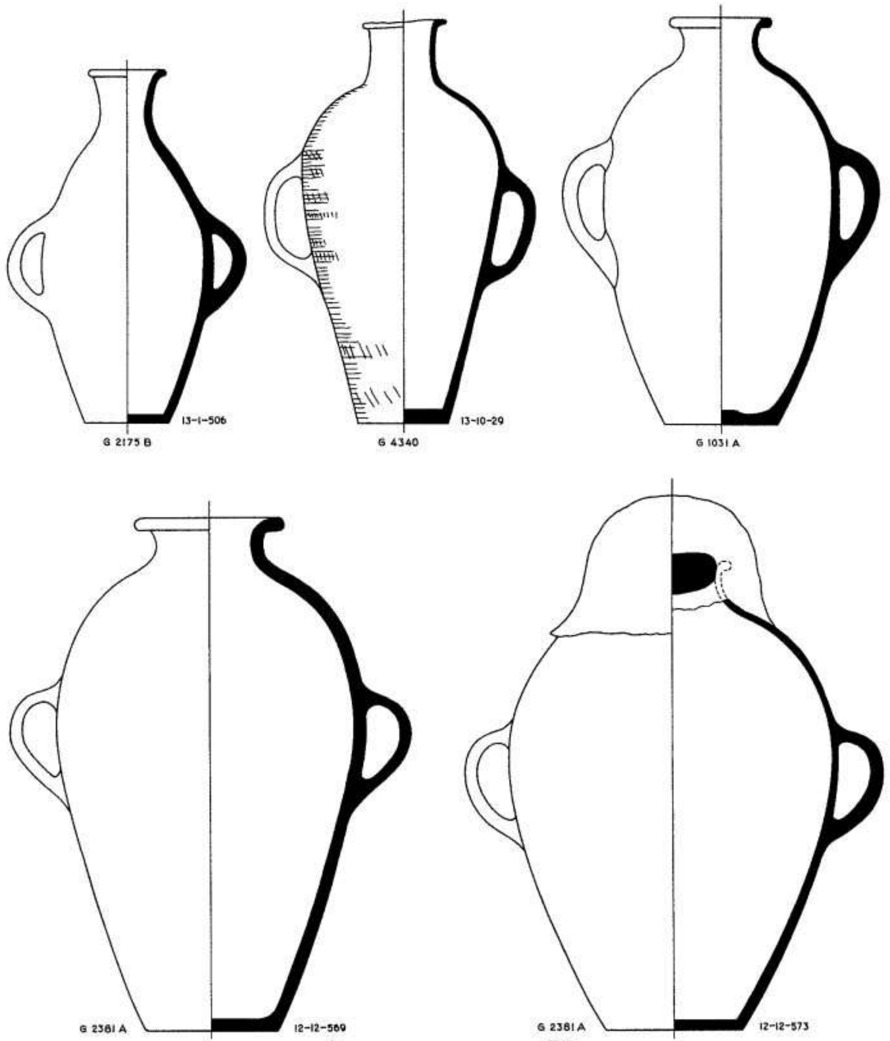

13-1-506
G 2175 B
13-10-29
G 4340
G 1031 A
G 2381 A
12-12-569
G 2381 A
12-12-573
0
20 CM

Fig. 96

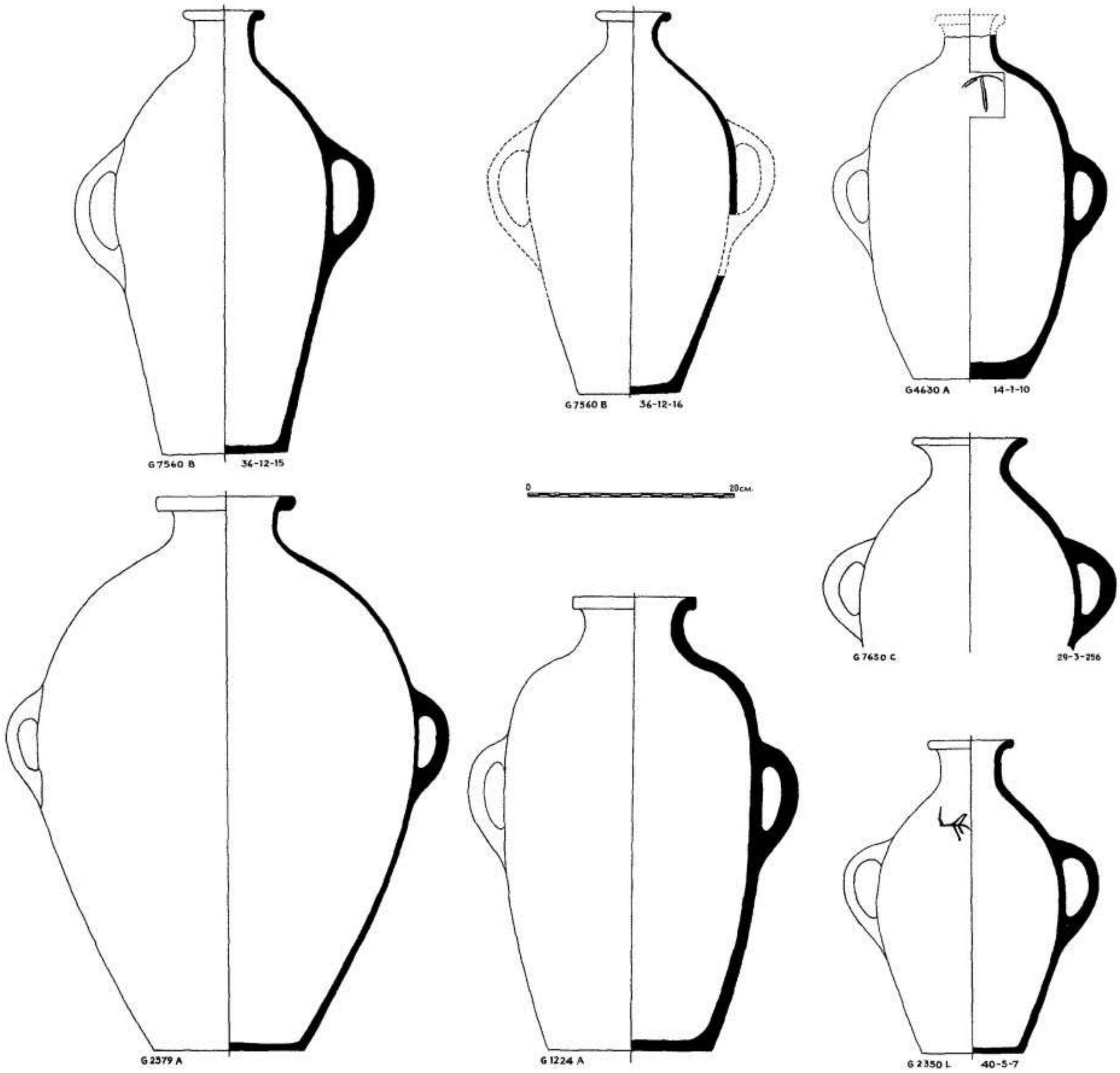

G 7560 B
36-12-15
G 7560 B
36-12-16
G 4630 A
14-1-10
0
20 CM.
G 7650 C
29-3-256
G 2379 A
G 1224 A
G 2350 L
40-5-7

Fig. 97

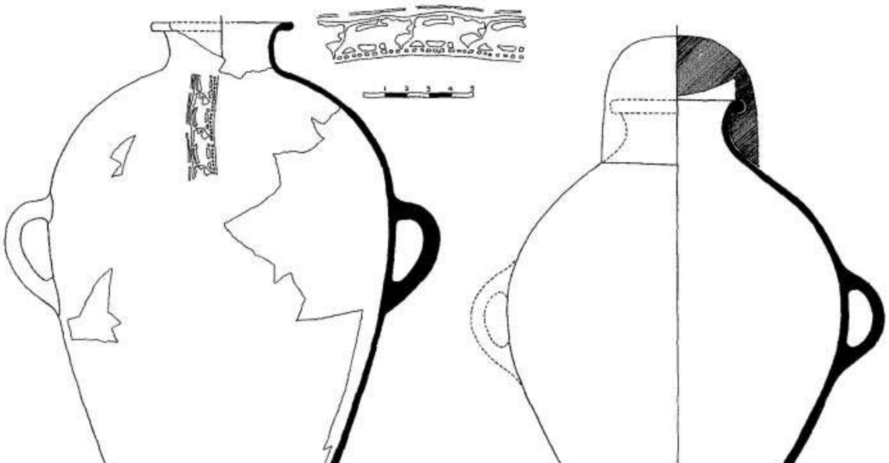

1 2 3 4 5
G 2370 B
35-7-41
1 2 3 4 5 6 7 8 9 10
G 2387 A
35-7-7

Fig. 98

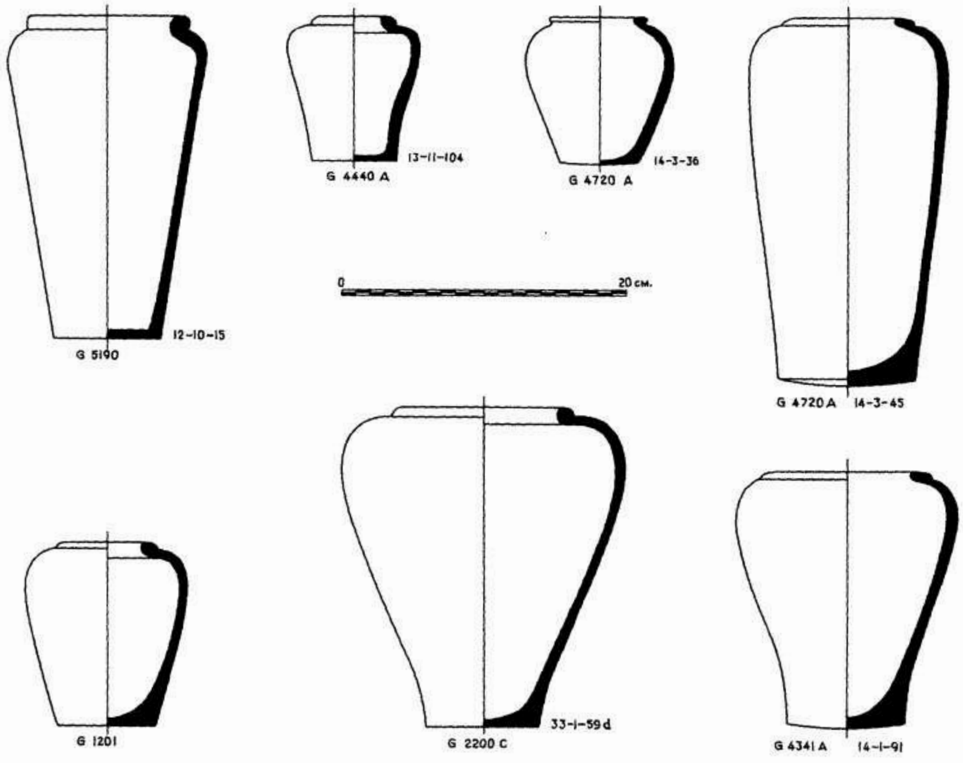

12-10-15
G 5190
13-11-104
G 4440 A
14-3-36
G 4720 A
0
20 CM.
G 4720 A
14-3-45
G 1201
33-1-59d
G 2200 C
G 4341 A
14-1-91

Fig. 99

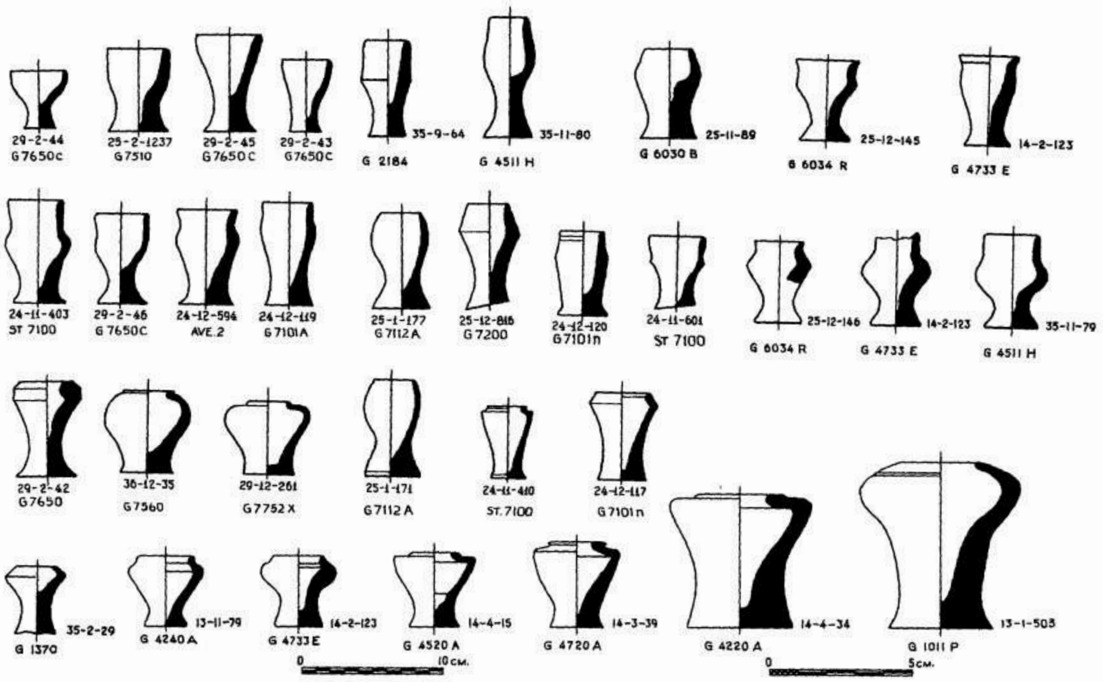

29-2-44
G7650c
25-2-1237
G7510
29-2-45
G7650C
29-2-43
G7650C
35-9-64
G 2184
35-11-80
G 4511 H
25-11-89
G 6030 B
25-12-145
G 6034 R
14-2-123
G 4733 E
24-11-403
ST 7100
29-2-46
G 7650C
24-12-594
AVE. 2
24-12-119
G 7101A
25-1-177
G 7112 A
25-12-816
G 7200
24-12-120
G7101n
24-11-601
ST 7100
25-12-146
G 6034 R
14-2-123
G 4733 E
35-11-79
G 4511 H
29-2-42
G7650
36-12-35
G7560
29-12-261
G7752 X
25-1-171
G7112 A
24-11-410
ST. 7100
24-12-117
G7101n
35-2-29
G 1370
13-11-79
G 4240 A
14-2-123
G 4733 E
14-4-15
G 4520 A
14-3-39
G 4720 A
14-4-34
G 4220 A
13-1-503
G 1011 P
0
10 CM.
0
5 CM.

Fig. 100

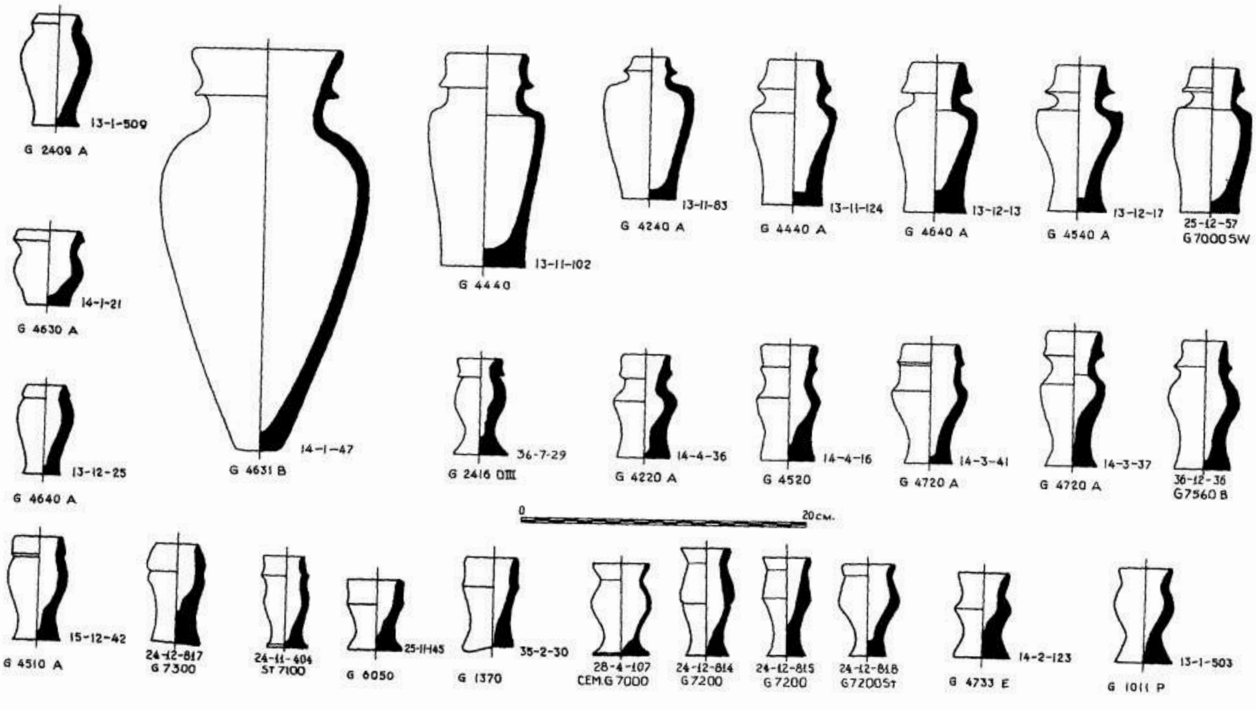

13-1-509
G 2409 A
14-1-21
G 4630 A
13-12-25
G 4640 A
14-1-47
G 4631 B
13-11-102
G 4440
13-11-83
G 4240 A
13-11-124
G 4440 A
13-12-13
G 4640 A
13-12-17
G 4540 A
25-12-57
G 7000 SW
36-7-29
G 2416 DIII
14-4-36
G 4220 A
14-4-16
G 4520
14-3-41
G 4720 A
14-3-37
G 4720 A
36-12-36
G 7560 B
0
20 CM.
15-12-42
G 4510 A
24-12-817
G 7300
24-11-404
ST 7100
25-11-145
G 6050
35-2-30
G 1370
28-4-107
CEM. G 7000
24-12-814
G 7200
24-12-815
G 7200
24-12-818
G 7200 ST
14-2-123
G 4733 E
13-1-503
G 1011 P

Fig. 101

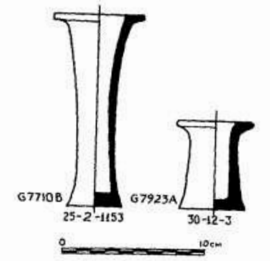

G 7710 B
25-2-1153
G 7923 A
30-12-3
0
10 CM

Fig. 102

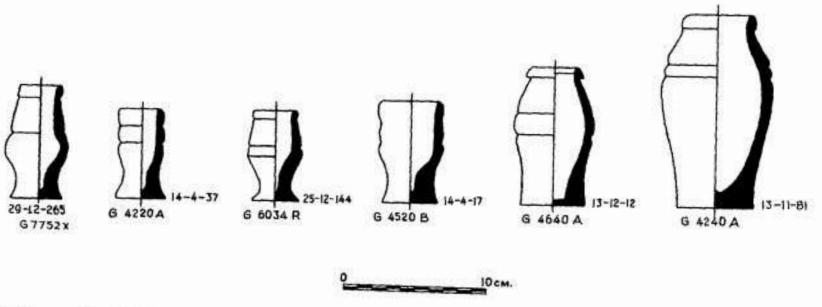

29-12-265
G 7752 x
14-4-37
G 4220 A
25-12-144
G 6034 R
14-4-17
G 4520 B
13-12-12
G 4640 A
13-11-81
G 4240 A
0
10 CM.

Fig. 103

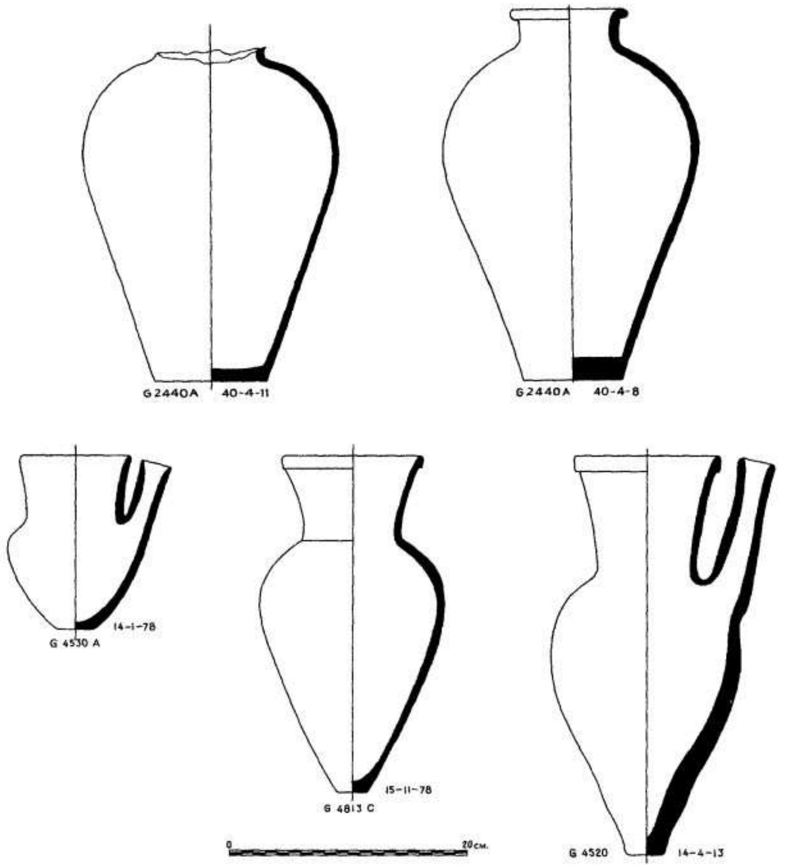

G 2440A
40-4-11
G 2440A
40-4-8
14-1-78
G 4530 A
15-11-78
G 4813 C
0
20CM.
G 4520
14-4-13

Fig. 104

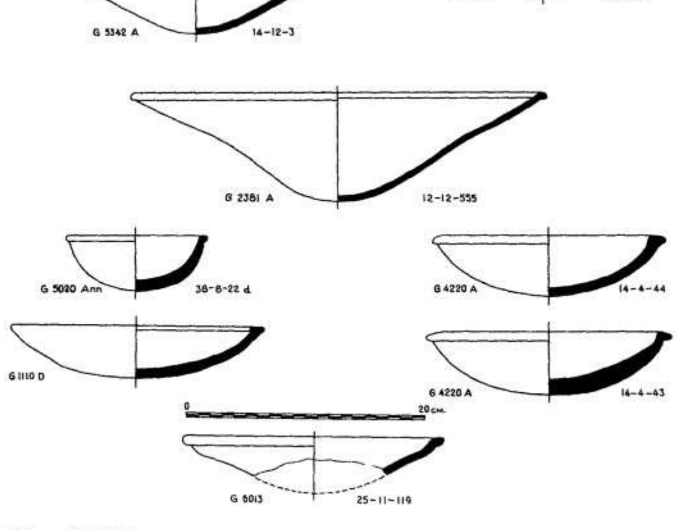

G 5342 A
14-12-3
G 2357 N
36-4-14
G 2381 A
12-12-555
G 5020 Ann
38-8-22 d
G 4220 A
14-4-44
G 1110 D
G 4220 A
14-4-43
0
20CM.
G 6013
25-11-119

Fig. 105

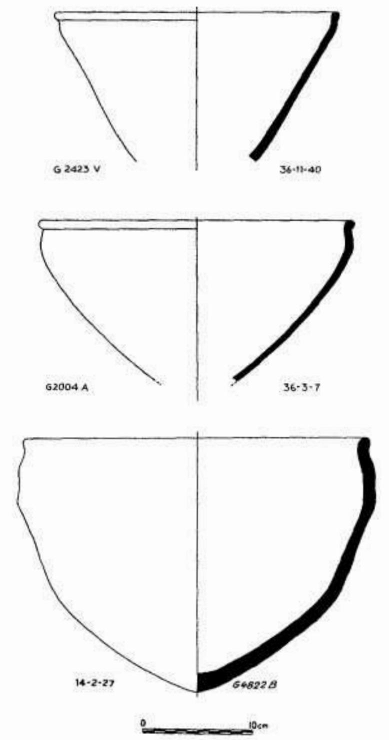

G 2423 V
36-11-40
G2004 A
36-3-7
14-2-27
G4822 B
0
10cm

Fig. 106

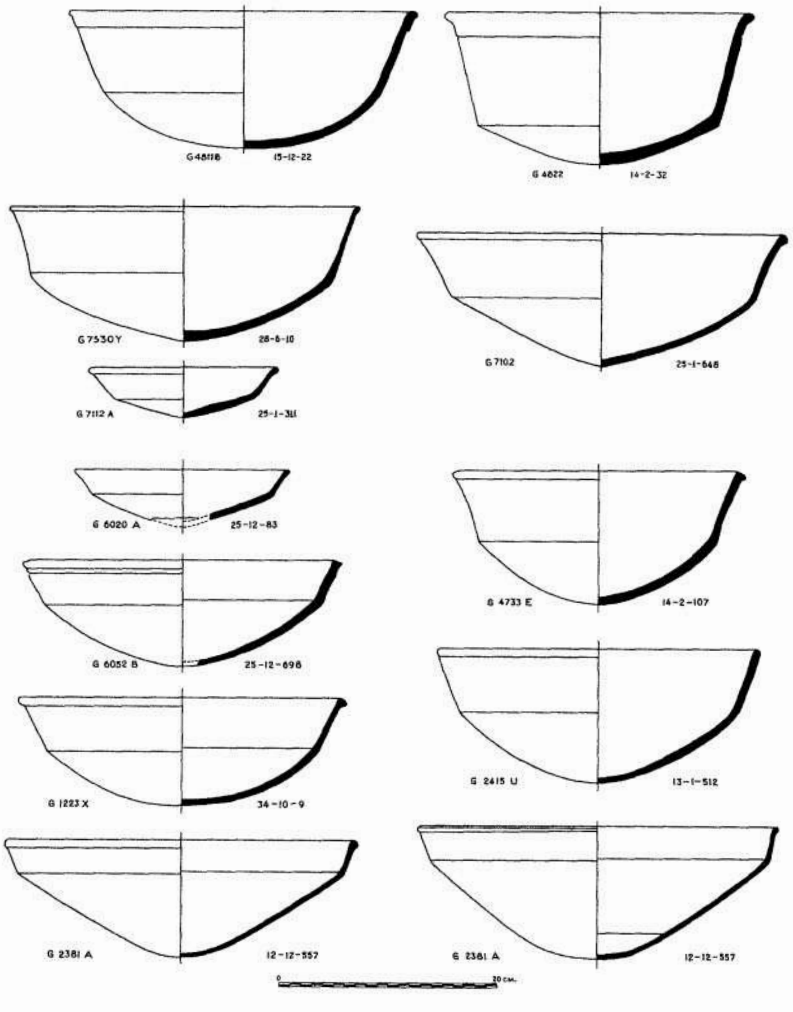

G4811B
15-12-22
G 4822
14-2-32
G 7530Y
28-6-10
G 7102
25-1-648
G 7112 A
25-1-311
G 6020 A
25-12-83
G 4733 E
14-2-107
G 6052 B
25-12-698
G 2415 U
13-1-512
G 1223 X
34-10-9
G 2381 A
12-12-557
G 2381 A
12-12-557
0
20 CM.

Fig. 107

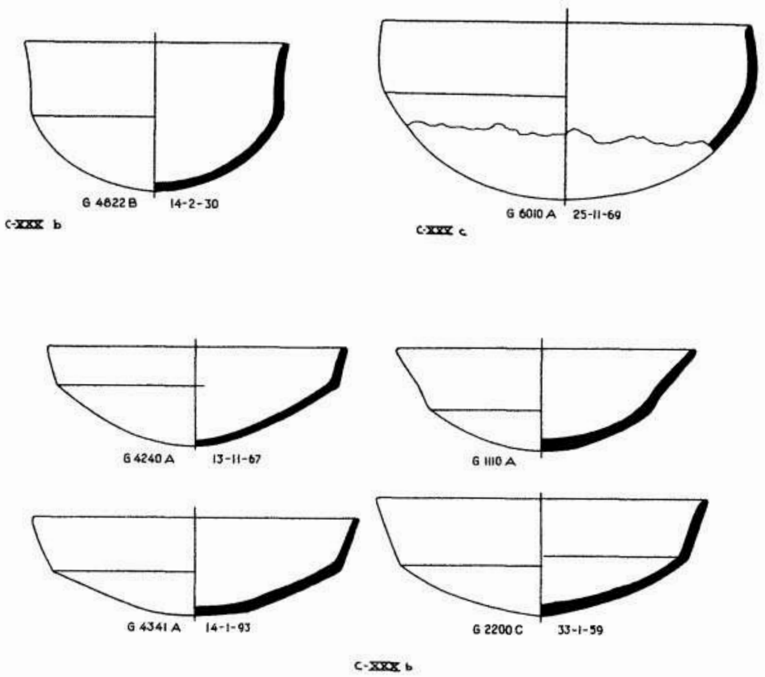

G 4822 B
14-2-30
C-XXX b
G 6010 A
25-11-69
C-XXX c
G 4240 A
13-11-67
G 1110 A
G 4341 A
14-1-93
G 2200 C
33-1-59
C-XXX b

Fig. 108

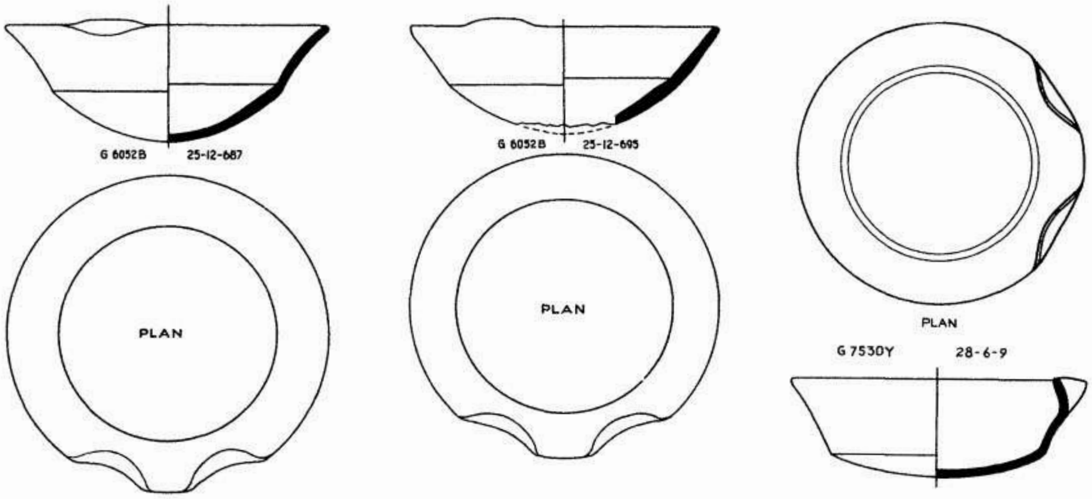

G 6052B
25-12-687
PLAN
G 6052B
25-12-695
PLAN
PLAN
G 7530Y
28-6-9

Fig. 109

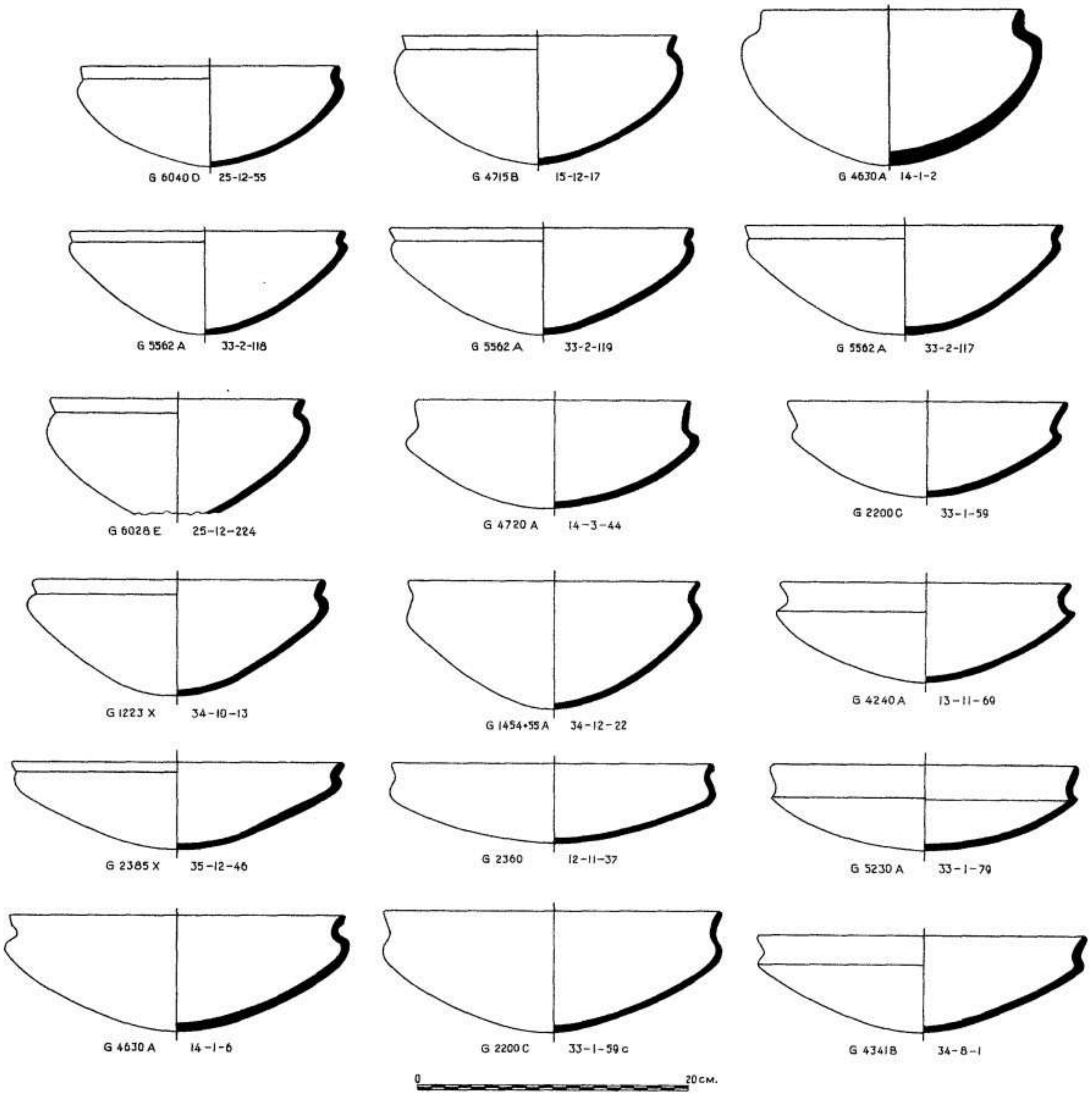

G 6040 D 25-12-55
G 4715 B 15-12-17
G 4630 A 14-1-2
G 5562 A 33-2-118
G 5562 A 33-2-119
G 5562 A 33-2-117
G 6028 E 25-12-224
G 4720 A 14-3-44
G 2200 C 33-1-59
G 1223 X 34-10-13
G 1454+55 A 34-12-22
G 4240 A 13-11-69
G 2385 X 35-12-46
G 2360 12-11-37
G 5230 A 33-1-79
G 4630 A 14-1-6
G 2200 C 33-1-59 c
G 4341 B 34-8-1
0
20 CM.

Fig. 110

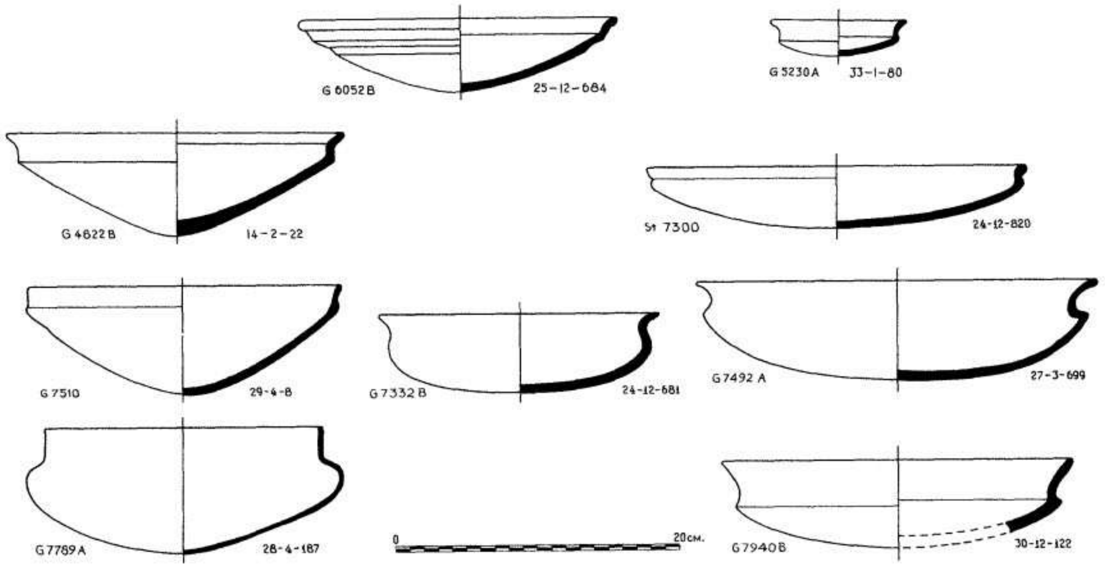

G 6052 B 25-12-684
G 5230 A 33-1-80
G 4822 B 14-2-22
St 7300 24-12-820
G 7510 29-4-8
G 7332 B 24-12-681
G 7492 A 27-3-699
G 7789 A 28-4-187
0
20 CM.
G 7940 B 30-12-122

Fig. 111

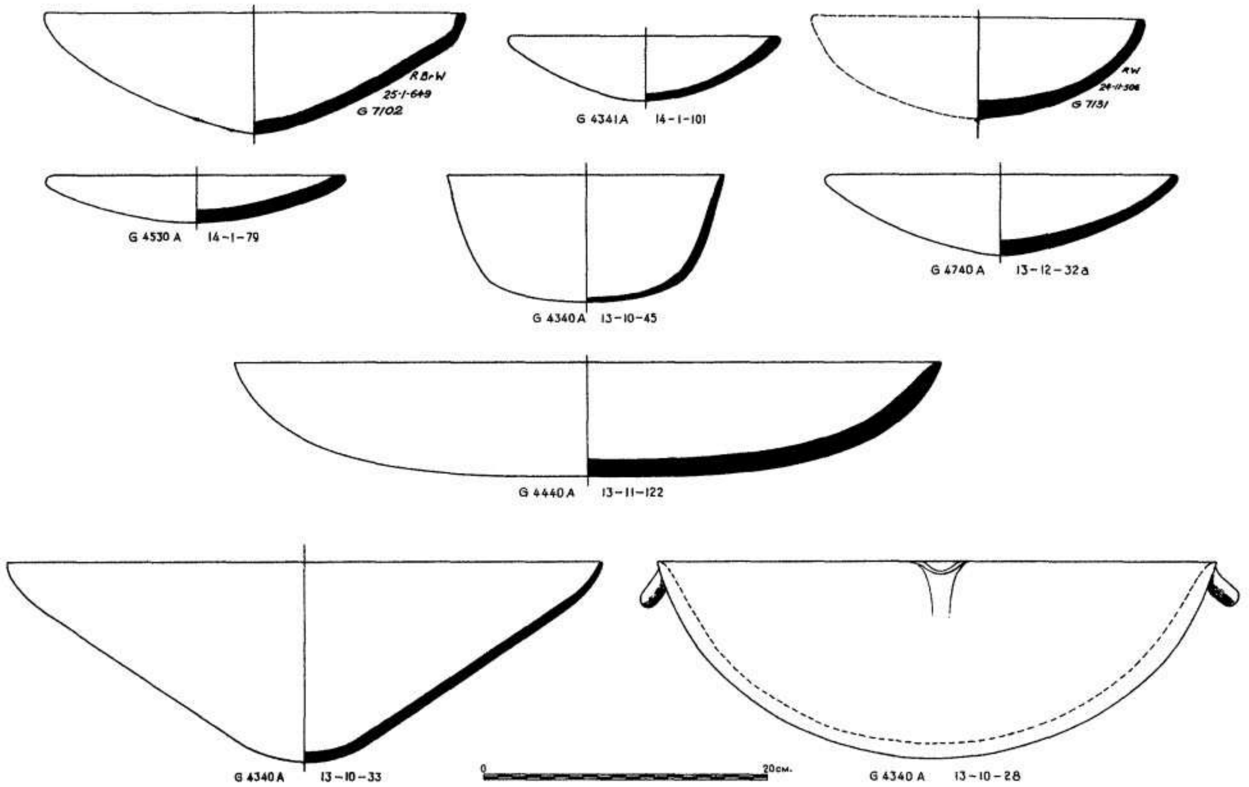

R Br W
25-1-649
G 7/02
G 4341A 14-1-101
RW
24-11-506
G 7/31
G 4530 A 14-1-79
G 4340A 13-10-45
G 4740 A 13-12-32a
G 4440 A 13-11-122
G 4340A 13-10-33
0
20 CM.
G 4340 A 13-10-28

Fig. 112

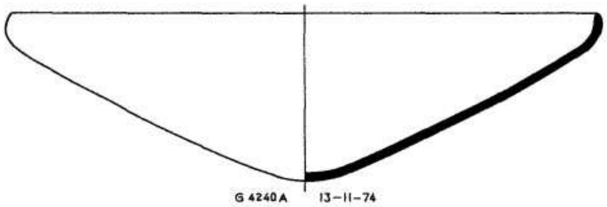

G 4240A 13-11-74

Fig. 113

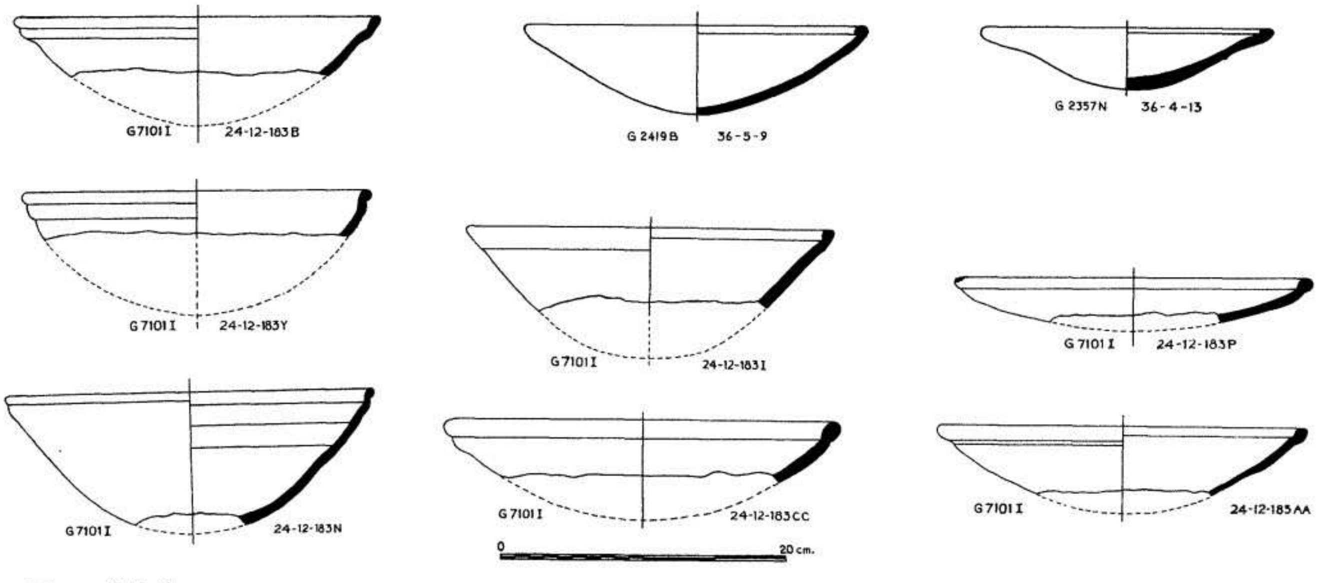

G7101I 24-12-183B
G 2419B 36-5-9
G 2357N 36-4-13
G7101I 24-12-183Y
G7101I 24-12-183I
G 7101I 24-12-183P
G7101I 24-12-183N
G7101I 24-12-183CC
G7101I 24-12-185AA
0
20 cm.

Fig. 114

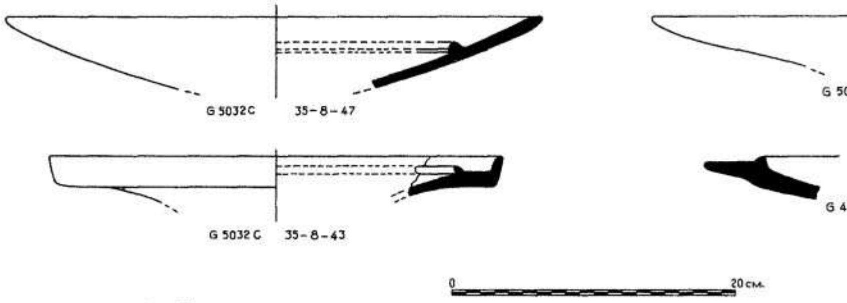

G 5032C 35-8-47
G 5032C 35-8-46
G 5032 C 35-8-43
G 4818 15-12-8
0
20 CM.

Fig. 115

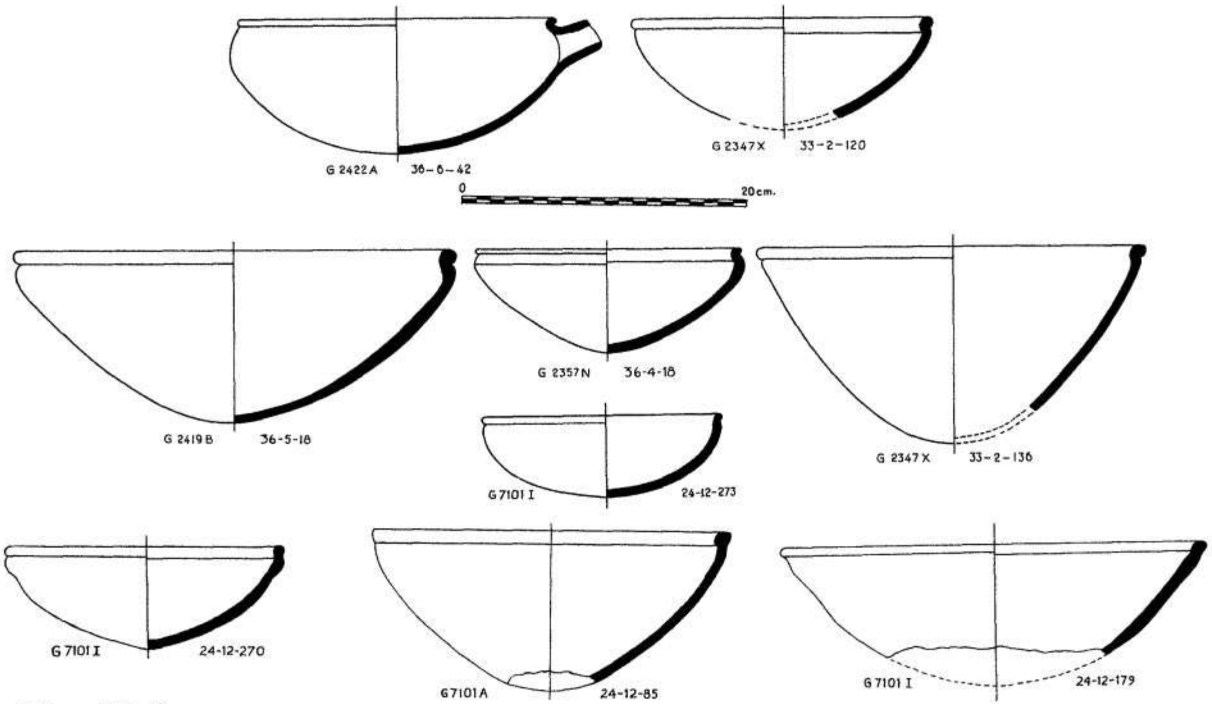

G 2422A 36-8-42
G 2347X 33-2-120
0
20cm.
G 2419B 36-5-18
G 2357N 36-4-18
G 2347X 33-2-136
G 7101 I 24-12-273
G 7101 I 24-12-270
G 7101A 24-12-85
G 7101 I 24-12-179

Fig. 116

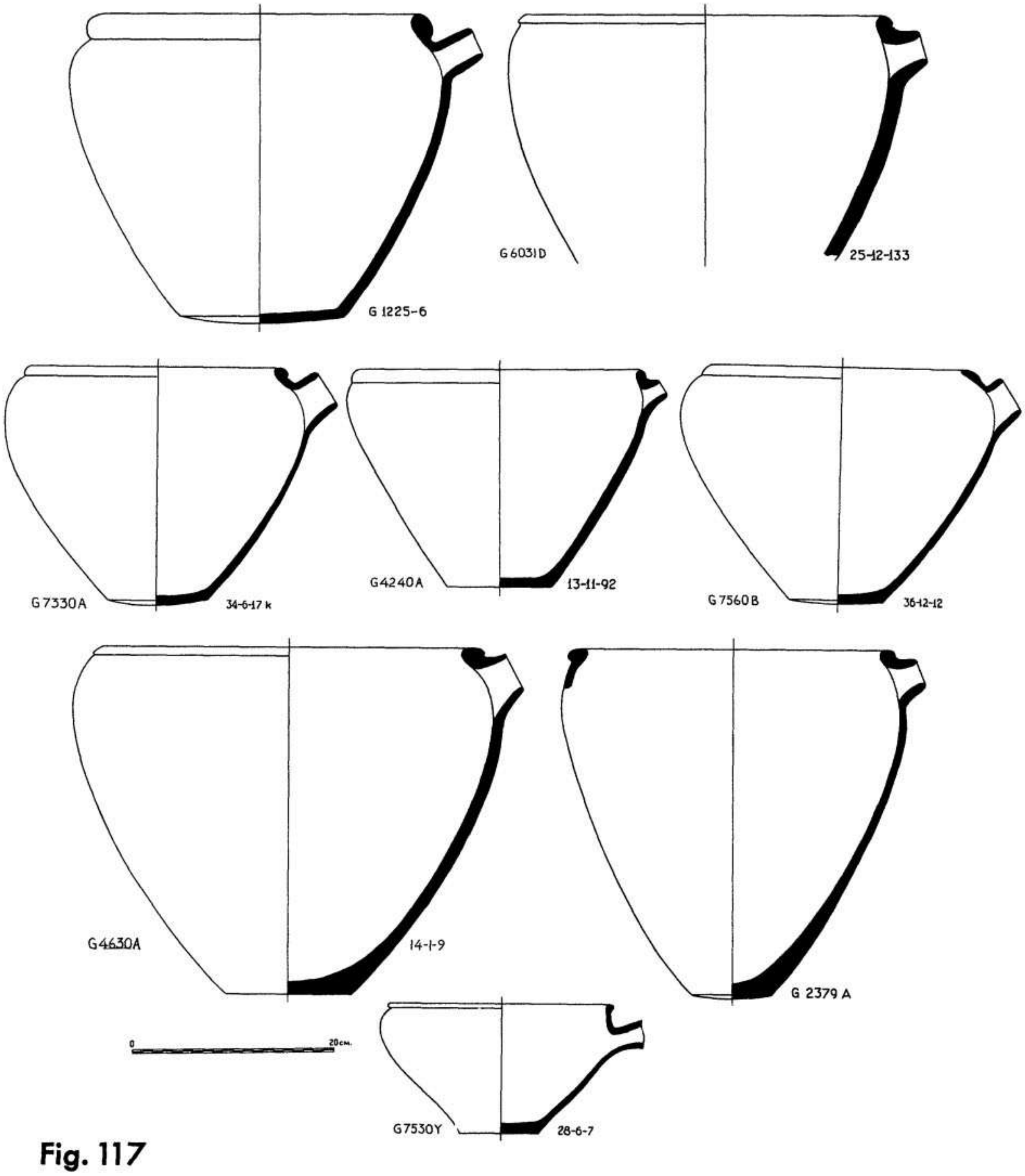

G 1225-6
G 6031 D
25-12-133
G7330A
34-6-17 k
G4240A
13-11-92
G7560B
36-12-12
G4630A
14-1-9
G 2379 A
0
20cm.
G7530Y
28-6-7

Fig. 117

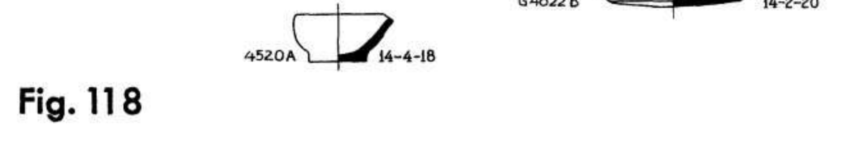

G4240
13-11-72
G4720A
14-3-33
G2416 DIII
36-7-31
4520A
14-4-18
G4822B
14-2-20

Fig. 118

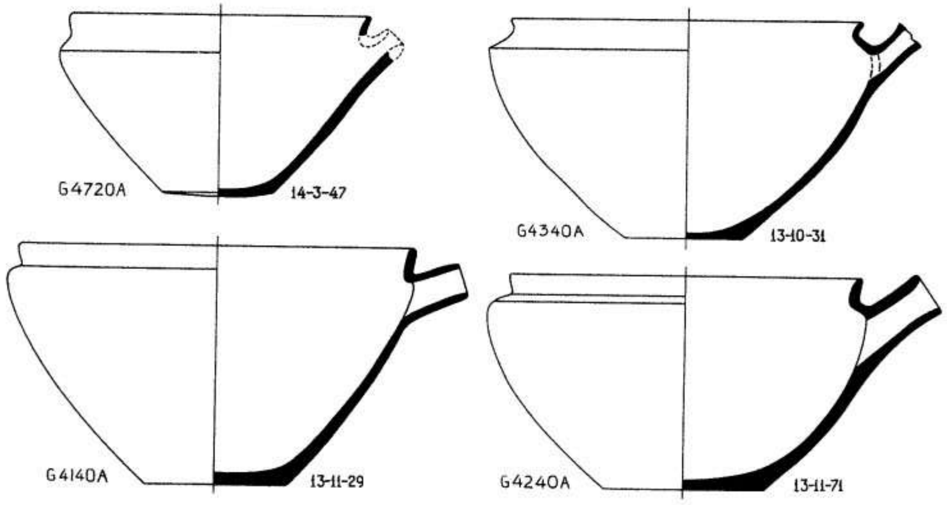

G4720A
14-3-47
G4340A
13-10-31
G4140A
13-11-29
G4240A
13-11-71

Fig. 119

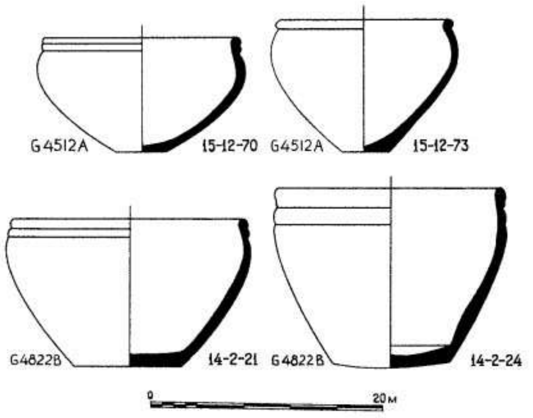

G4512A
15-12-70
G4512A
15-12-73
G4822B
14-2-21
G4822B
14-2-24
0
20 M

Fig. 120

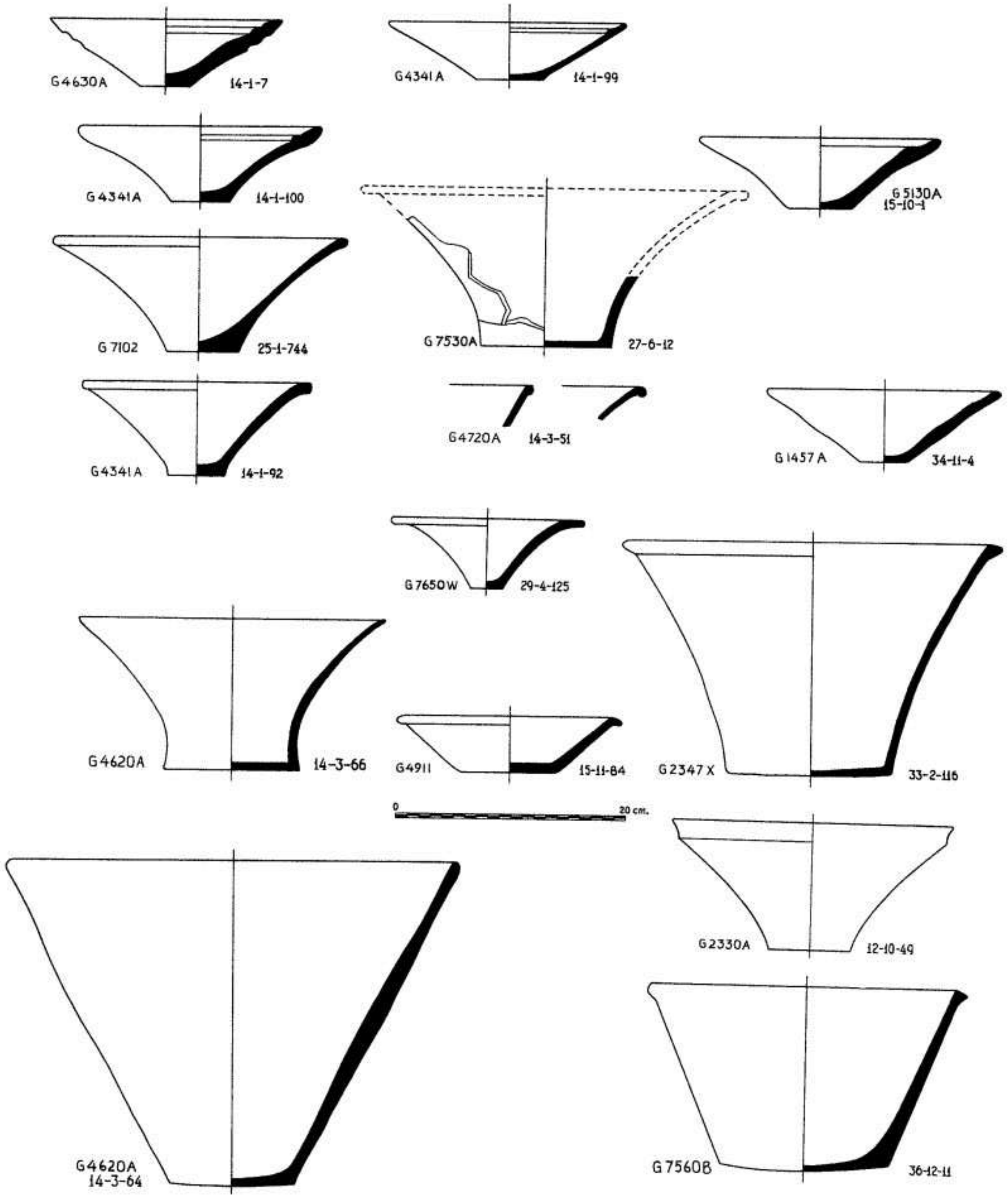

G4630A
14-1-7
G4341A
14-1-99
G4341A
14-1-100
G5130A
15-10-1
G7102
25-1-744
G7530A
27-6-12
G4720A
14-3-51
G4341A
14-1-92
G1457A
34-11-4
G7650W
29-4-125
G4620A
14-3-66
G4911
15-11-84
G2347X
33-2-116
0
20 cm.
G2330A
12-10-49
G4620A
14-3-64
G7560B
36-12-11

Fig. 121

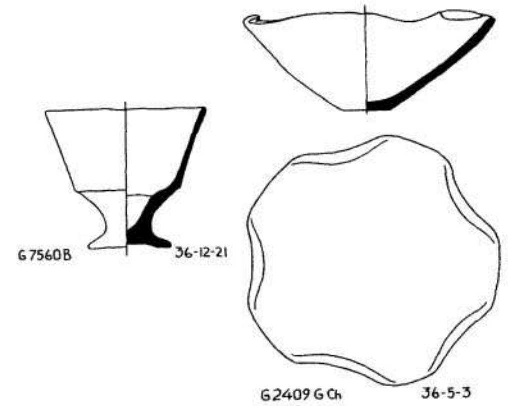

G 7560B
36-12-21
G2409 G Ch
36-5-3

Fig. 122

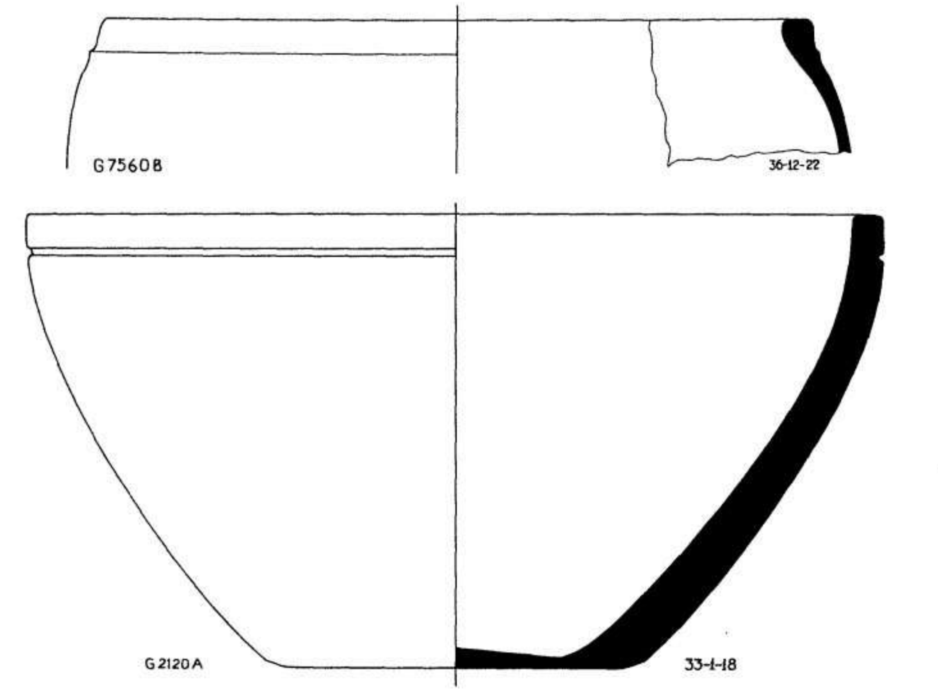

G 7560B
36-12-22
G 2120 A
33-1-18
0
20 cm.
D LXXI
G 1225-12

Fig. 123

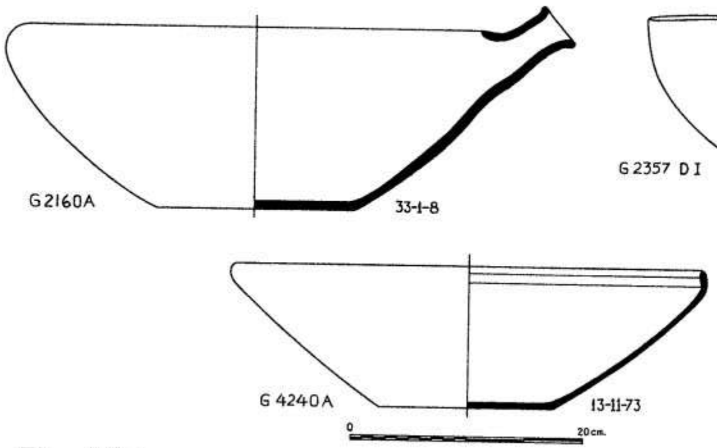

G2160A
33-1-8
G 2357 D I
35-11-47
G 4240A
13-11-73
0
20cm.

Fig. 124

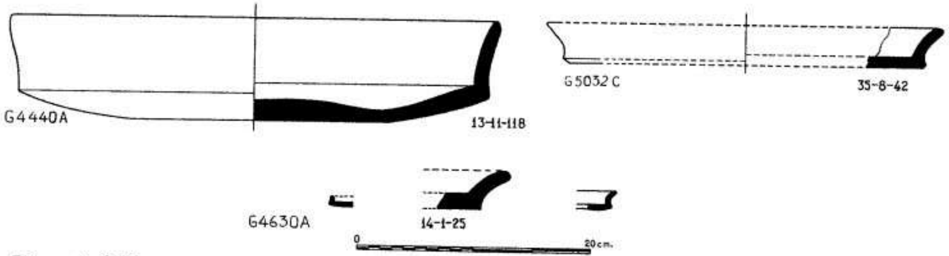

G4440A
13-11-118
G5032 C
35-8-42
G4630A
14-1-25
0
20cm.

Fig. 125

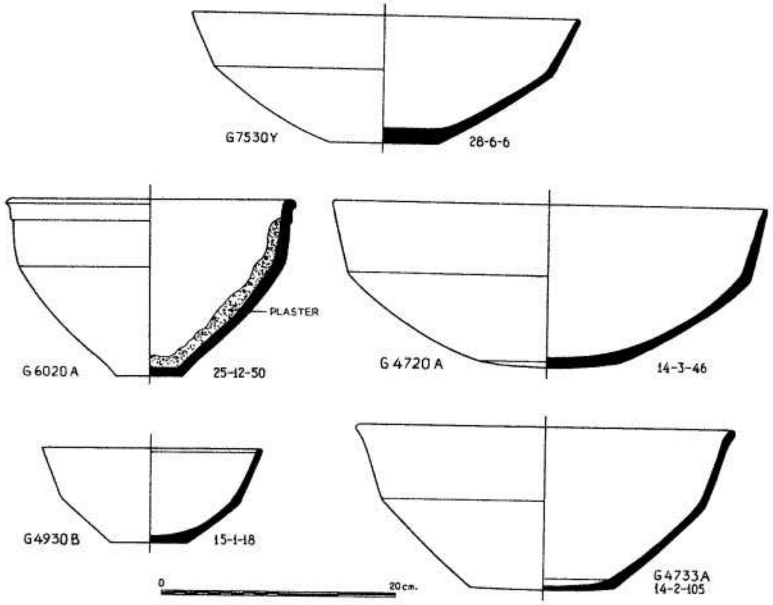

G7530Y
28-6-6
PLASTER
G 6020 A
25-12-50
G 4720 A
14-3-46
G4930 B
15-1-18
G 4733 A
14-2-105
0
20cm.

Fig. 126

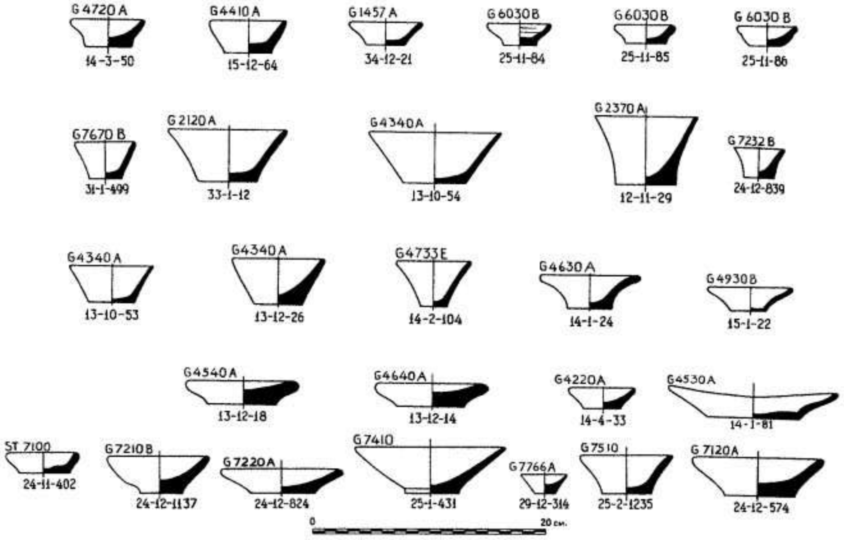

G 4720 A
14-3-50
G4410 A
15-12-64
G 1457 A
34-12-21
G 6030 B
25-11-84
G 6030 B
25-11-85
G 6030 B
25-11-86
G7670 B
31-1-499
G 2120 A
33-1-12
G4340 A
13-10-54
G 2370 A
12-11-29
G 7232 B
24-12-839
G4340 A
13-10-53
G4340 A
13-12-26
G4733 E
14-2-104
G4630 A
14-1-24
G4930 B
15-1-22
G4540 A
13-12-18
G4640 A
13-12-14
G4220 A
14-4-33
G4530 A
14-1-81
ST 7100
24-11-402
G7210 B
24-12-1137
G 7220 A
24-12-824
G7410
25-1-431
G7766 A
29-12-314
G 7510
25-2-1235
G 7120 A
24-12-574
0
20 cm.

Fig. 127

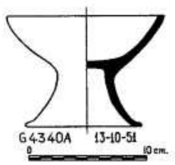

G4340A
13-10-51
0
10 cm.

Fig. 128

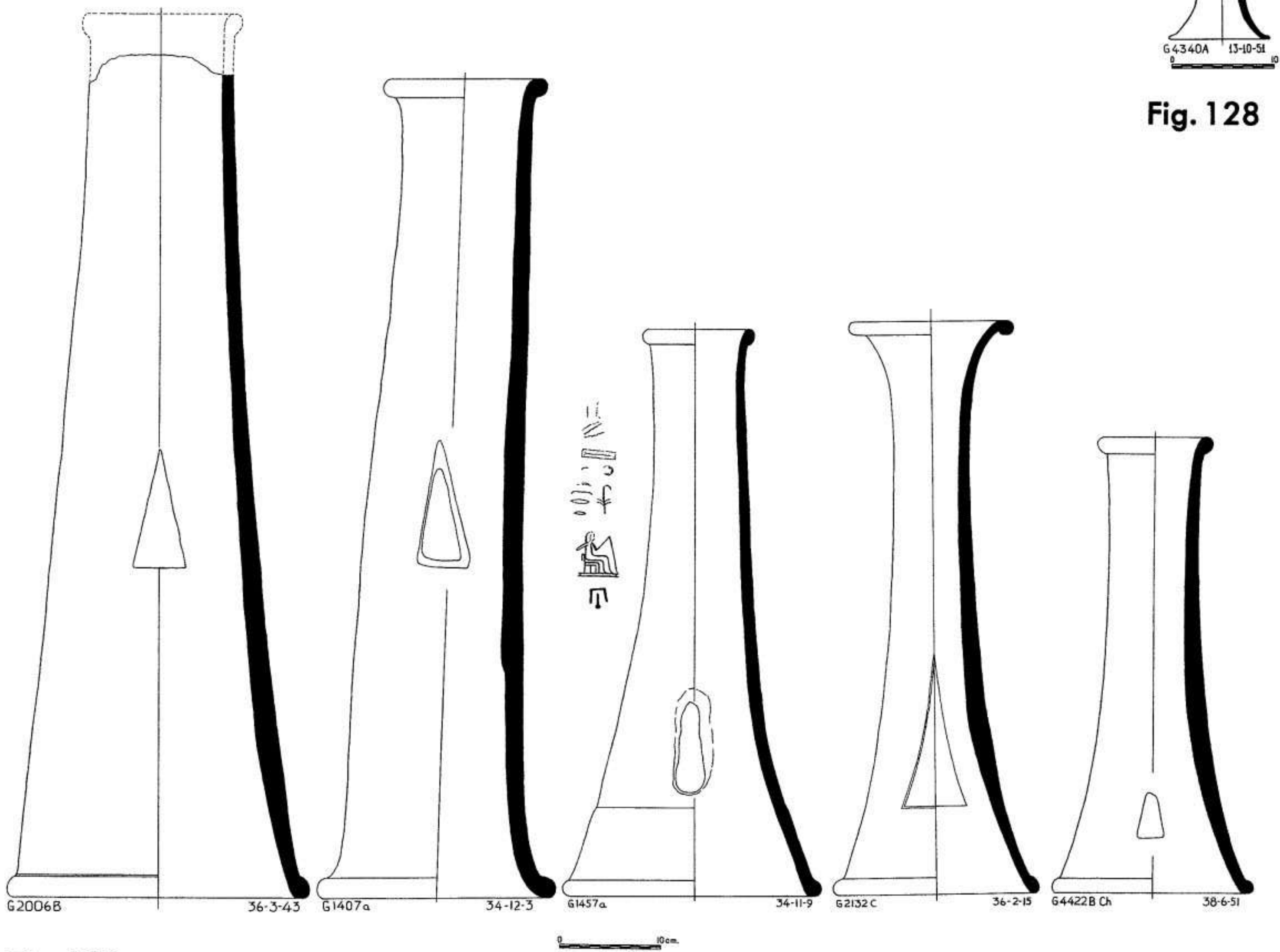

G2006B
36-3-43
G1407a
34-12-3
G1457a
34-11-9
G2132C
36-2-15
G4422B Ch
38-6-51
0
10 cm.

Fig. 129

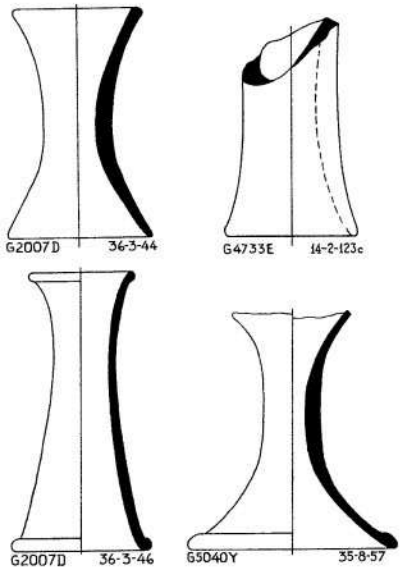

G2007D
36-3-44
G4733E
14-2-123c
G2007D
36-3-46
G5040Y
35-8-57

Fig. 130

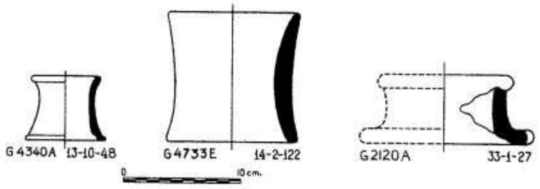

G4340A
13-10-48
G4733E
14-2-122
G2120A
33-1-27
0
10 cm.

Fig. 131

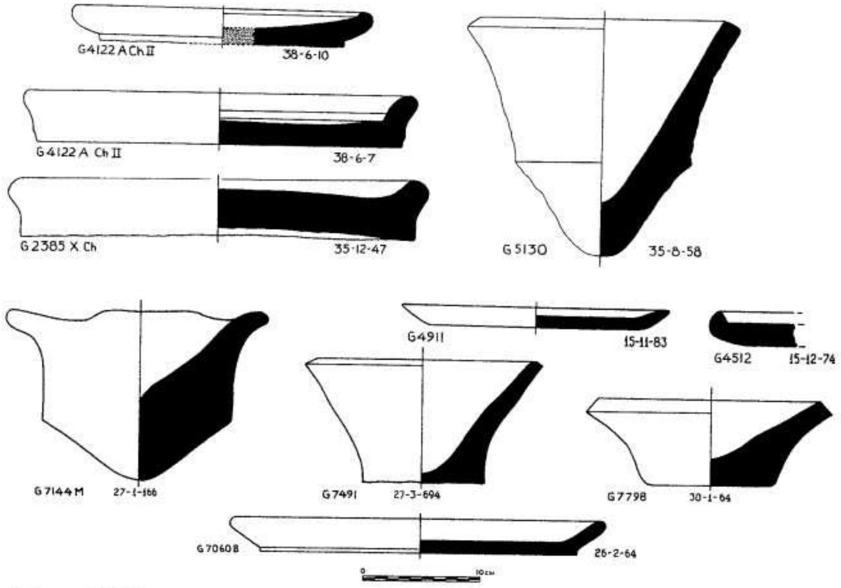

G4122 A Ch II
38-6-10
G4122 A Ch II
38-6-7
G2385 X Ch
35-12-47
G5130
35-8-58
G7144M
27-1-166
G4911
15-11-83
G4512
15-12-74
G7491
27-3-694
G7798
30-1-64
G7060B
26-2-64
0
10cm

Fig. 132

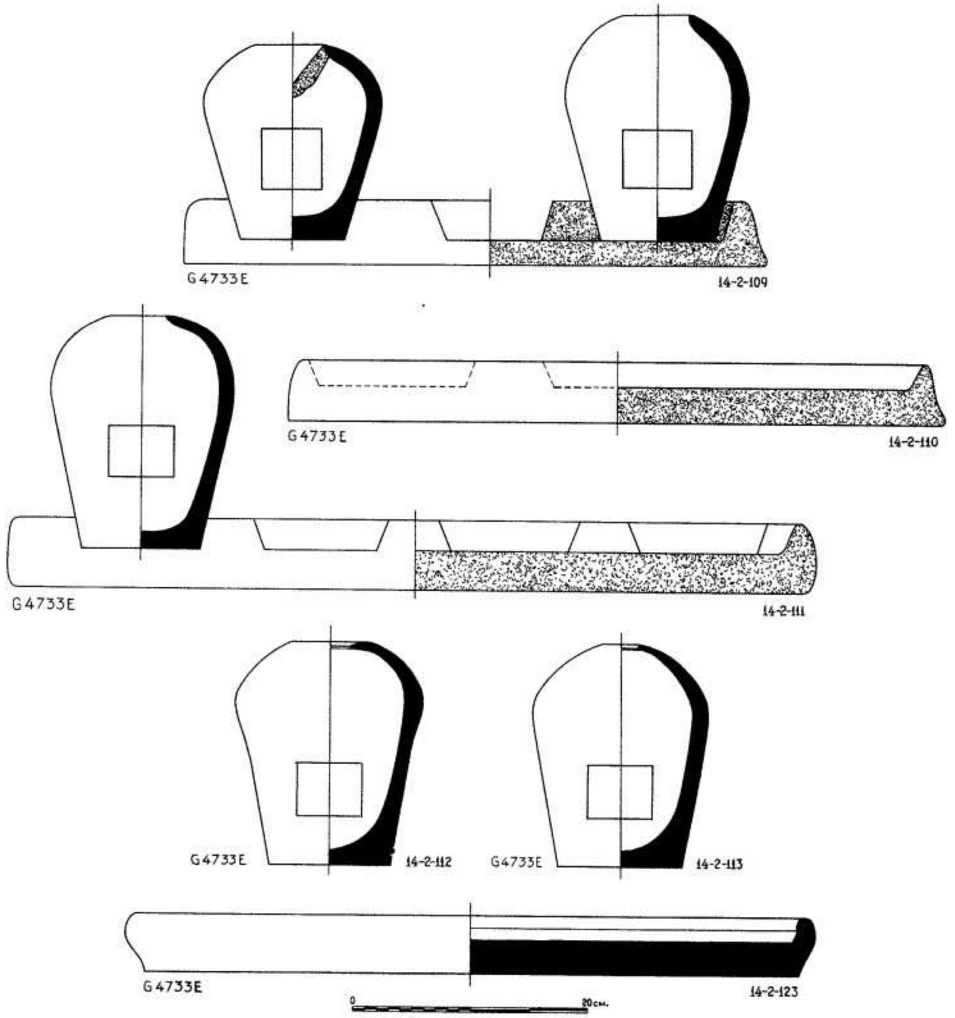

G4733E
14-2-109
G4733E
14-2-110
G4733E
14-2-111
G4733E
14-2-112
G4733E
14-2-113
G4733E
14-2-123
0
20cm.

Fig. 133

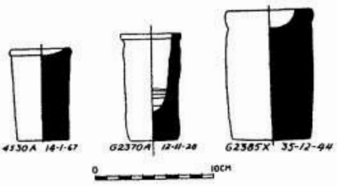

G 4330 A
14-1-67
G2370A
12-11-28
G2385X
35-12-44
0
10CM

Fig. 134

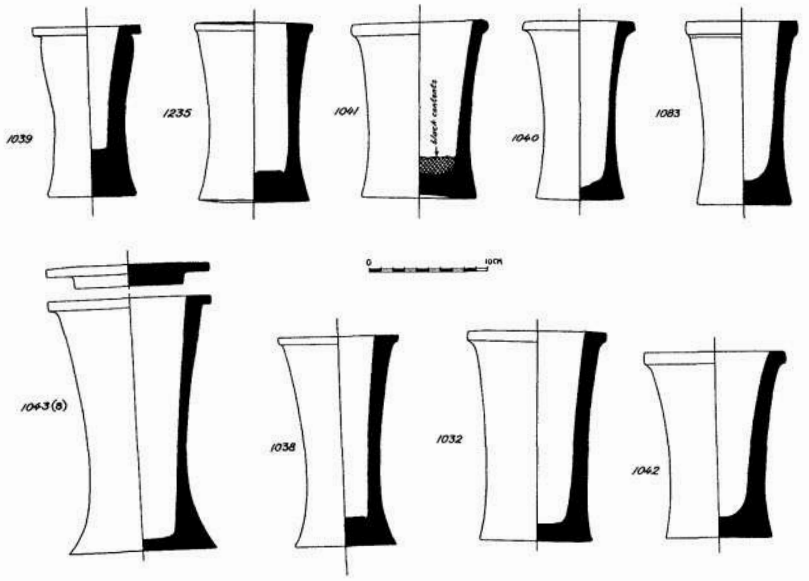

1039
1235
1041
black contents
1040
1083
0
10CM
1043(B)
1038
1032
1042

Fig. 135

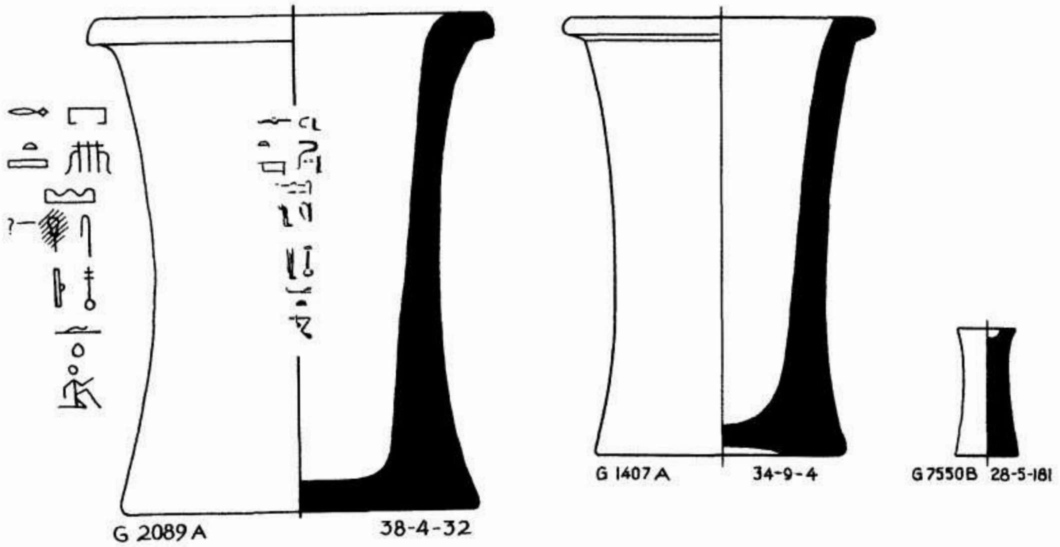

G 2089 A
38-4-32
G 1407 A
34-9-4
G 7550B
28-5-181

Fig. 136

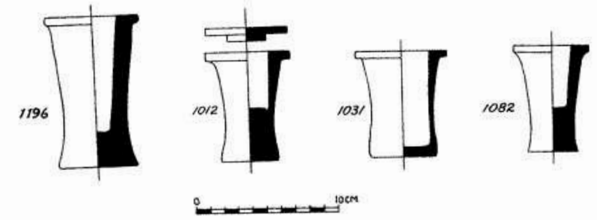

1196
1012
1031
1082
0
10CM

Fig. 137

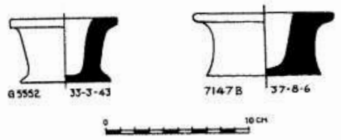

G5552
33-3-43
7147B
37-8-6
0
10CM

Fig. 138

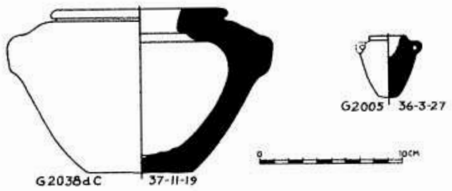

G2038dC
37-11-19
G2005
36-3-27
0
10CM

Fig. 139

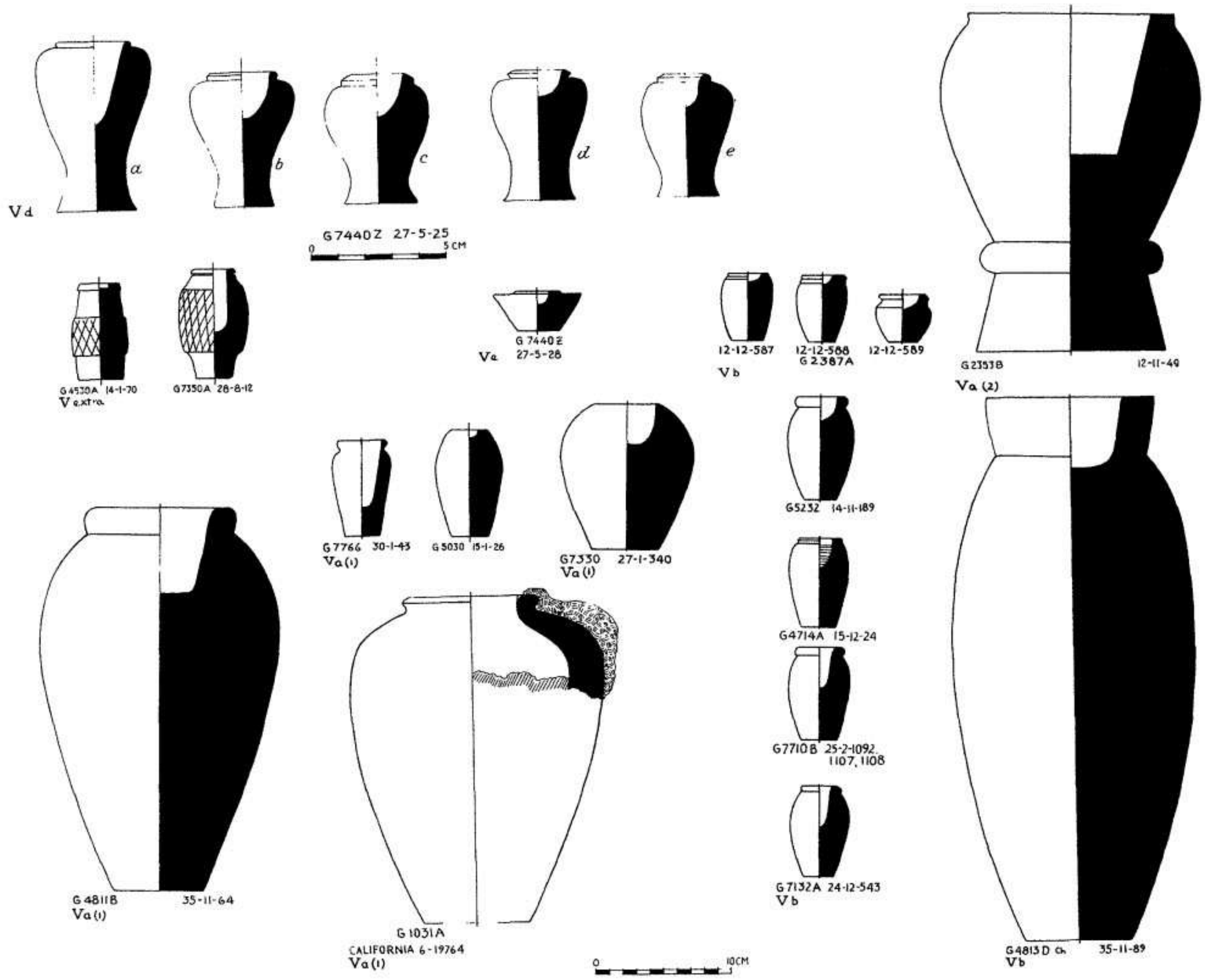

Vd
a
b
c
d
e
G7440Z 27-5-25
0
5 CM
G4530A 14-1-70
V extra
G7350A 28-8-12
Ve
G 7440 Z
27-5-28
12-12-587
12-12-588
G 2387A
12-12-589
Vb
G2353B
12-11-49
Va (2)
G7766 30-1-43
Va (1)
G5030 15-1-26
G7330 27-1-340
Va (1)
G5232 14-11-189
G4714A 15-12-24
G7710B 25-2-1092, 1107, 1108
G7132A 24-12-543
Vb
G4811B
Va (1)
35-11-64
G1031A
CALIFORNIA 6-19764
Va (1)
0
10CM
G4813D ch
Vb
35-11-89

Fig. 140

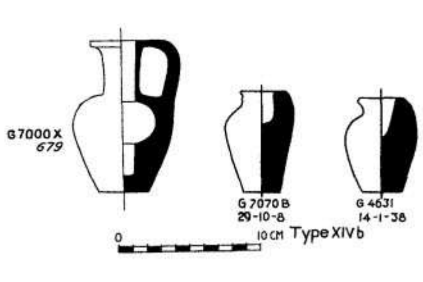

G7000X
679
G7070B
29-10-8
G4631
14-1-38
0
10CM
Type XIVb

Fig. 141

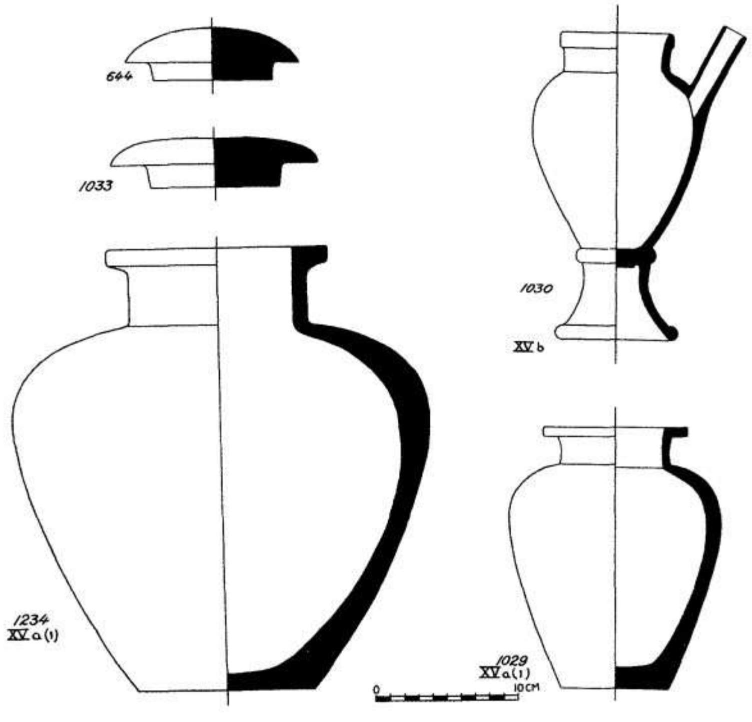

644
1033
1234
XV a (1)
1030
XV b
1029
XV a (1)
0
10CM

Fig. 142

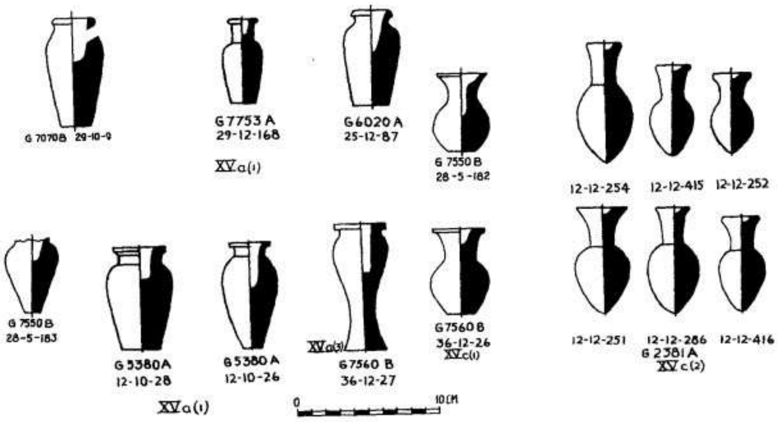

G 7070B 29-10-9
G7753 A
29-12-168
XVa(1)
G6020 A
25-12-87
G 7550 B
28-5-182
12-12-254
12-12-415
12-12-252
G 7550 B
28-5-183
G 5380A
12-10-28
G 5380 A
12-10-26
XVa(3)
G7560 B
36-12-27
G7560 B
36-12-26
XVc(1)
12-12-251
12-12-286
12-12-416
G 2381 A
XVc(2)
XVa(1)
0
10 CM

Fig. 143

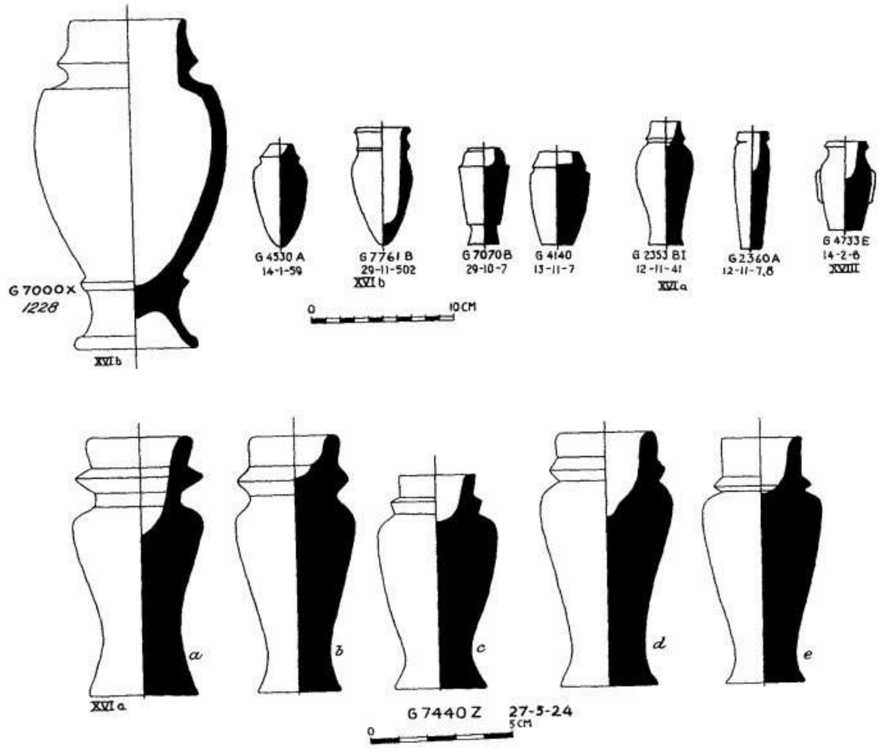

G 7000 X
1228
XVI b
G 4530 A
14-1-59
G 7761 B
29-11-502
XVI b
G 7070 B
29-10-7
G 4140
13-11-7
G 2353 BI
12-11-41
XVI a
G 2360 A
12-11-7,8
G 4733 E
14-2-8
XVIII
0
10 CM
a
b
c
d
e
XVI a
G 7440 Z
27-5-24
0
5 CM

Fig. 144

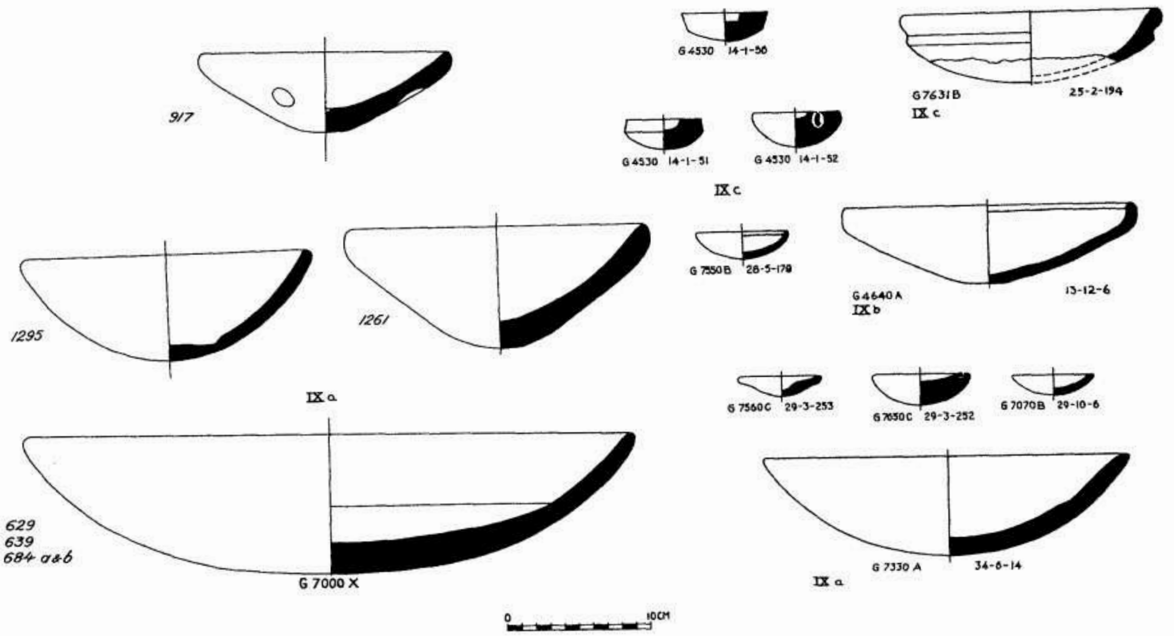

G 4530 14-1-56
G7631B 25-2-194
IX c
917
G 4530 14-1-51
G 4530 14-1-52
IX c
G 7550 B 28-5-179
G 4640 A 13-12-6
IX b
1295
1261
IX a
G 7560 C 29-3-253
G 7650 C 29-3-252
G 7070 B 29-10-6
629
639
684 a&b
G 7000 X
G 7330 A 34-6-14
IX a
0
10CM

Fig. 145

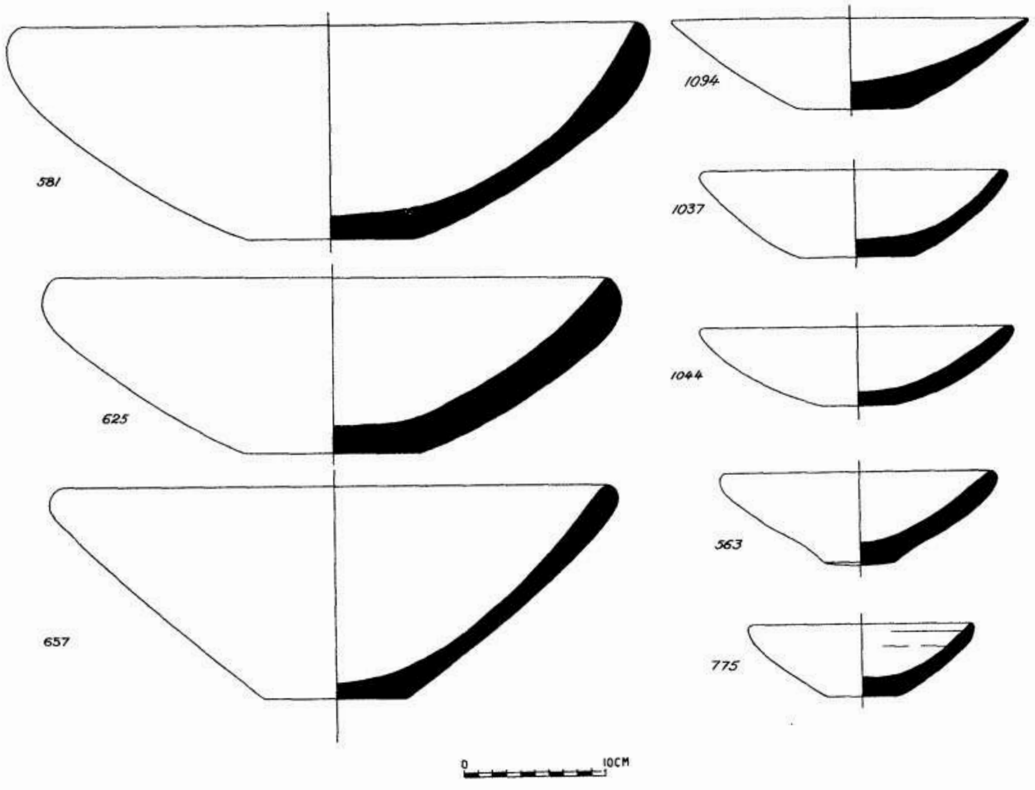

581
1094
1037
625
1044
563
657
775
0
10CM

Fig. 146

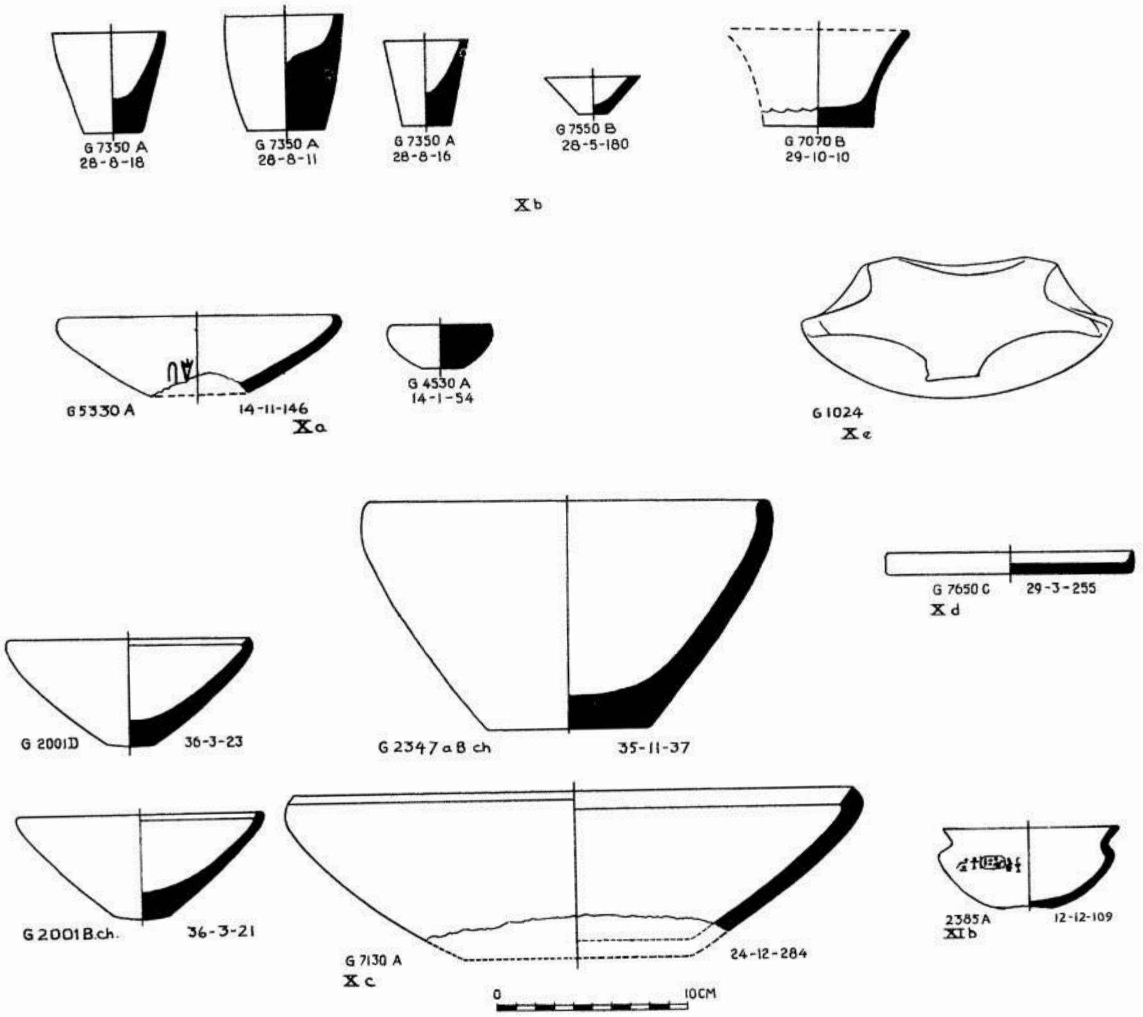

G 7350 A
28-8-18
G 7350 A
28-8-11
G 7350 A
28-8-16
G 7550 B
28-5-180
G 7070 B
29-10-10
X b
G 5330 A
14-11-146
X a
G 4530 A
14-1-54
G 1024
X e
G 7650 C
29-3-255
X d
G 2001D
36-3-23
G 2347 a B ch
35-11-37
G 2001 B.ch.
36-3-21
G 7130 A
X c
24-12-284
2385A
XI b
12-12-109
0
10CM

Fig. 147

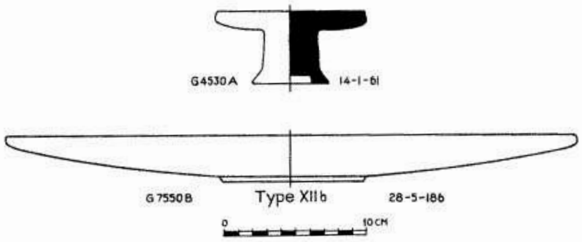
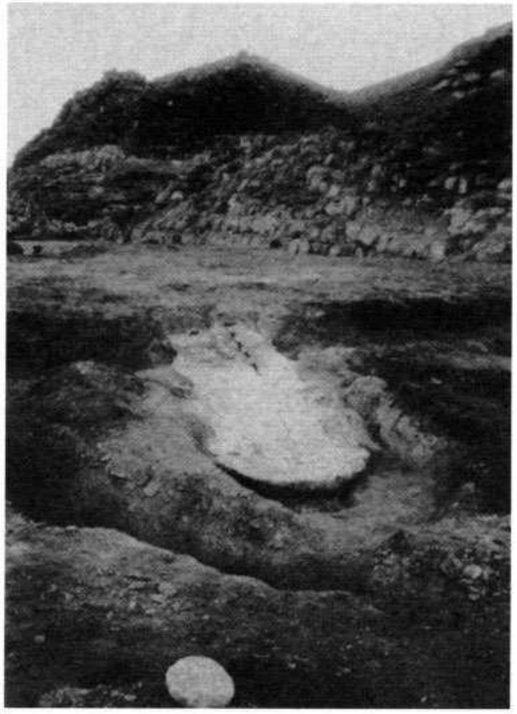
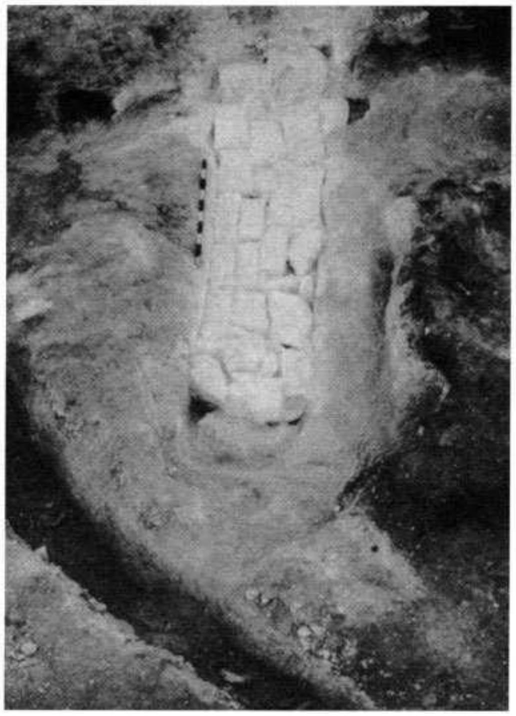

G4530A
14-1-61
G 7550 B
Type XII b
28-5-186
0
10CM

Fig. 148

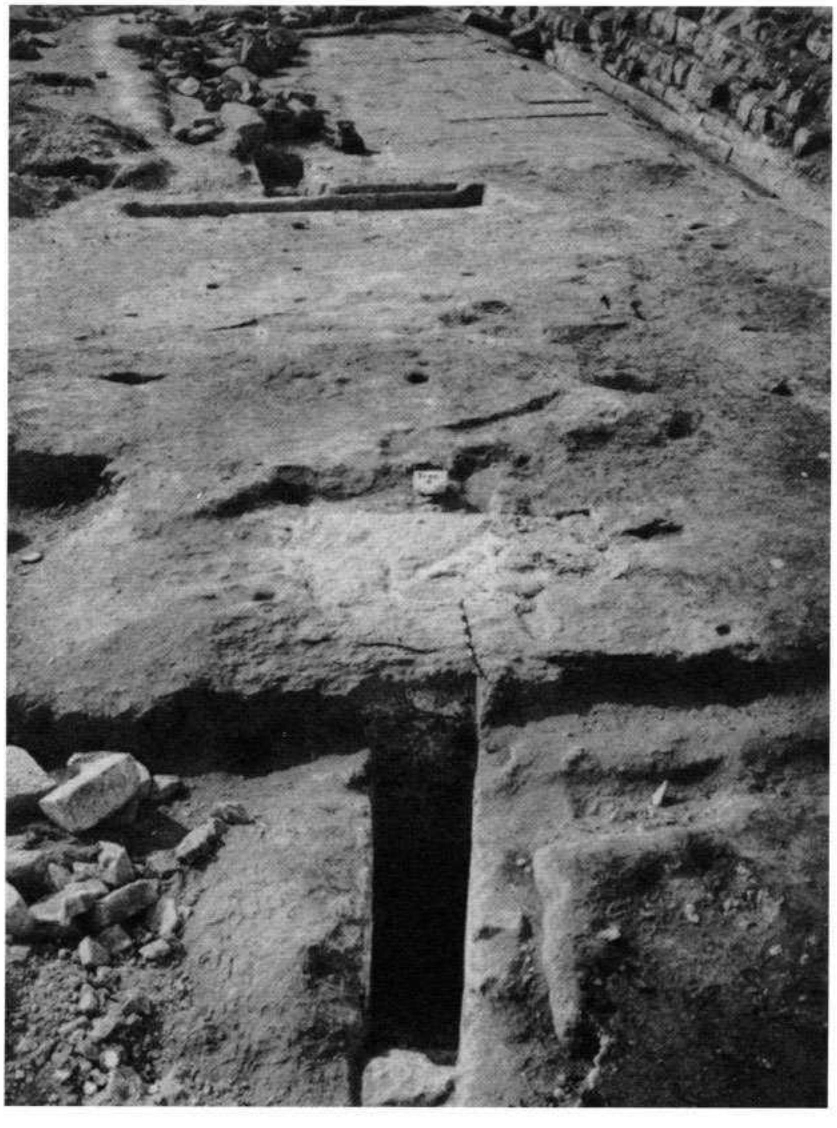
PLATES



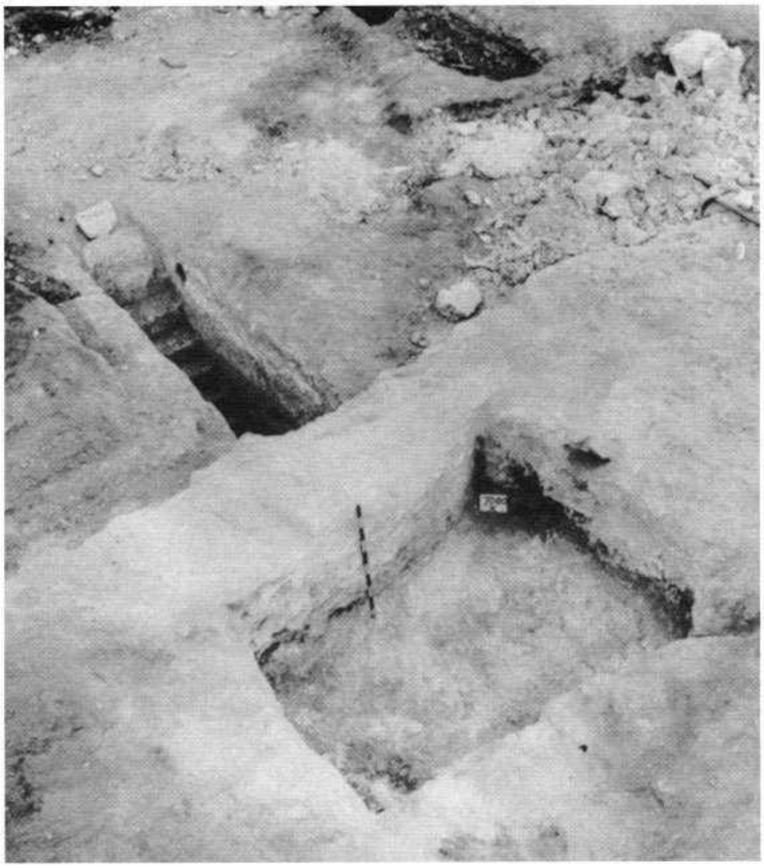
a



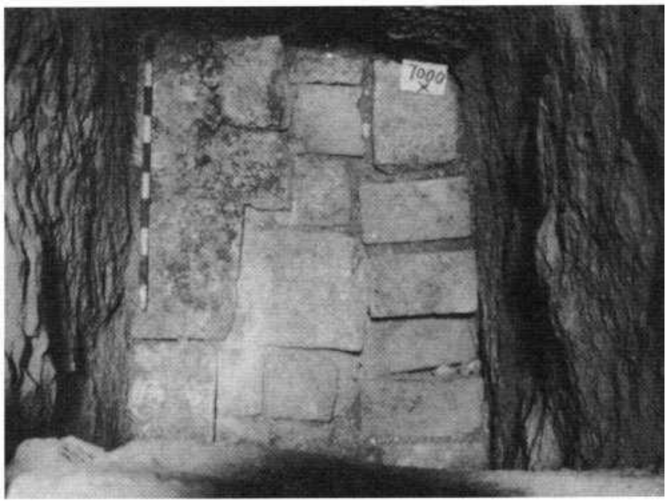
b



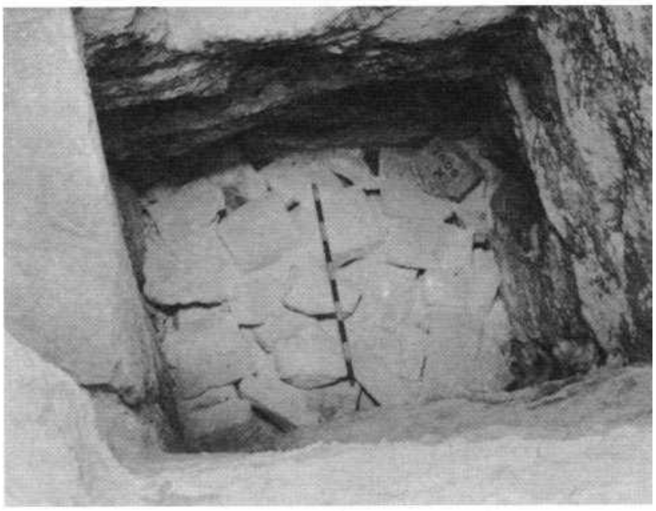
c



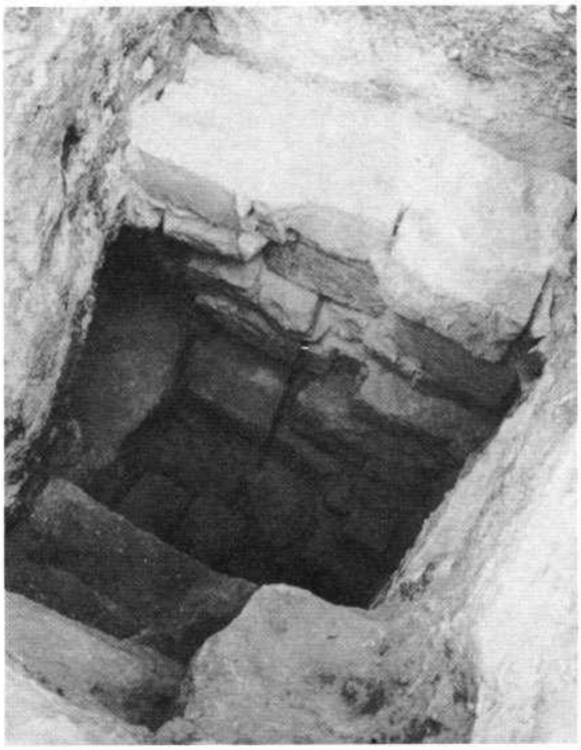
a



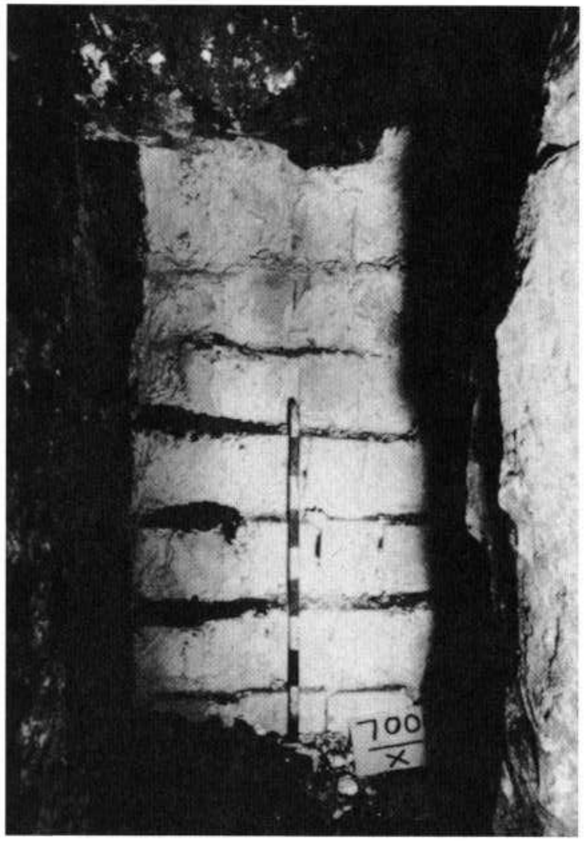
b



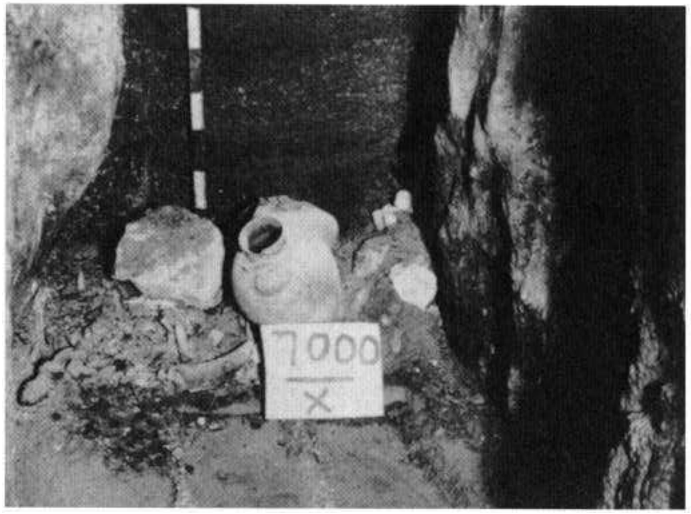
c



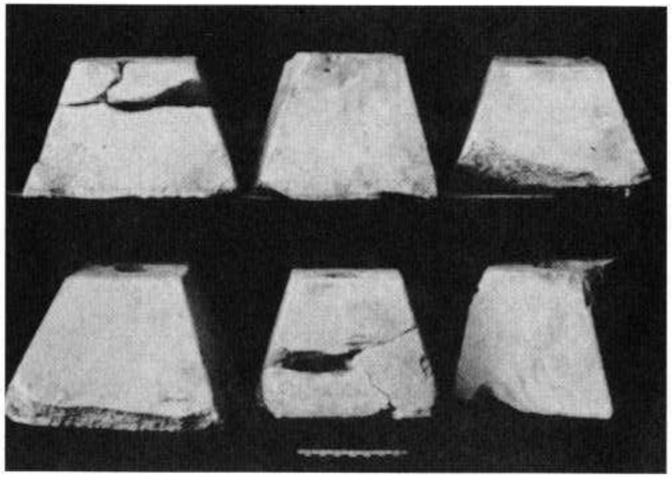
d



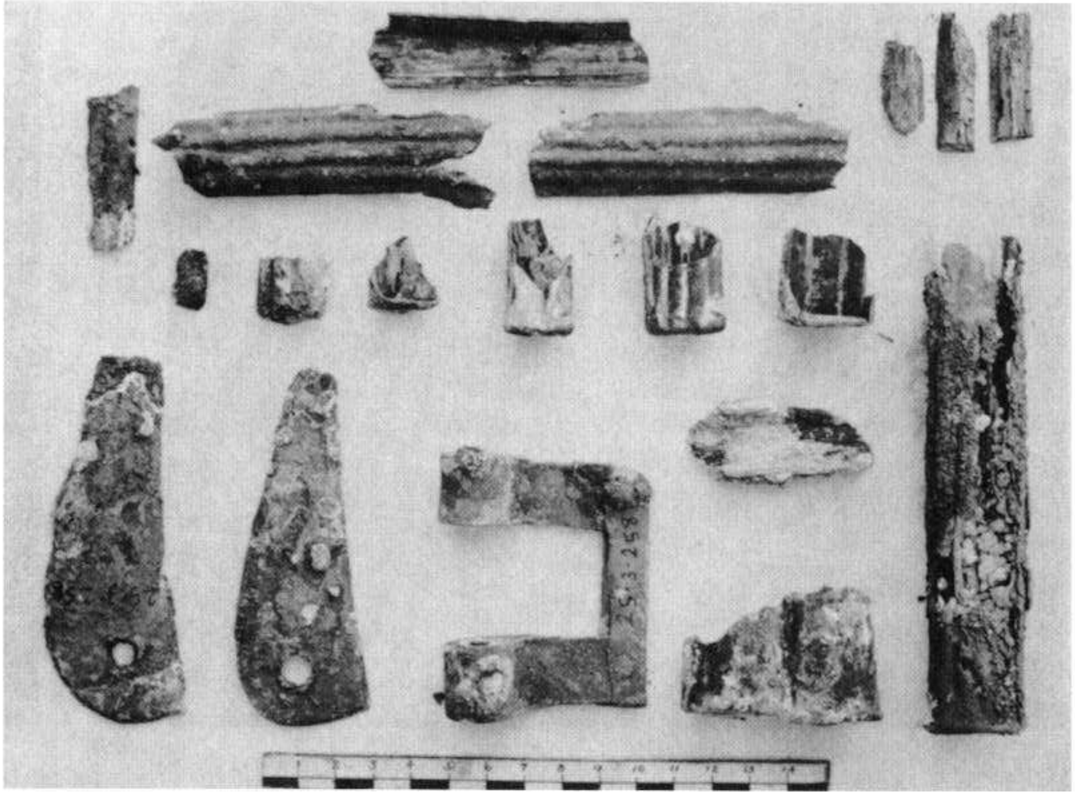
a



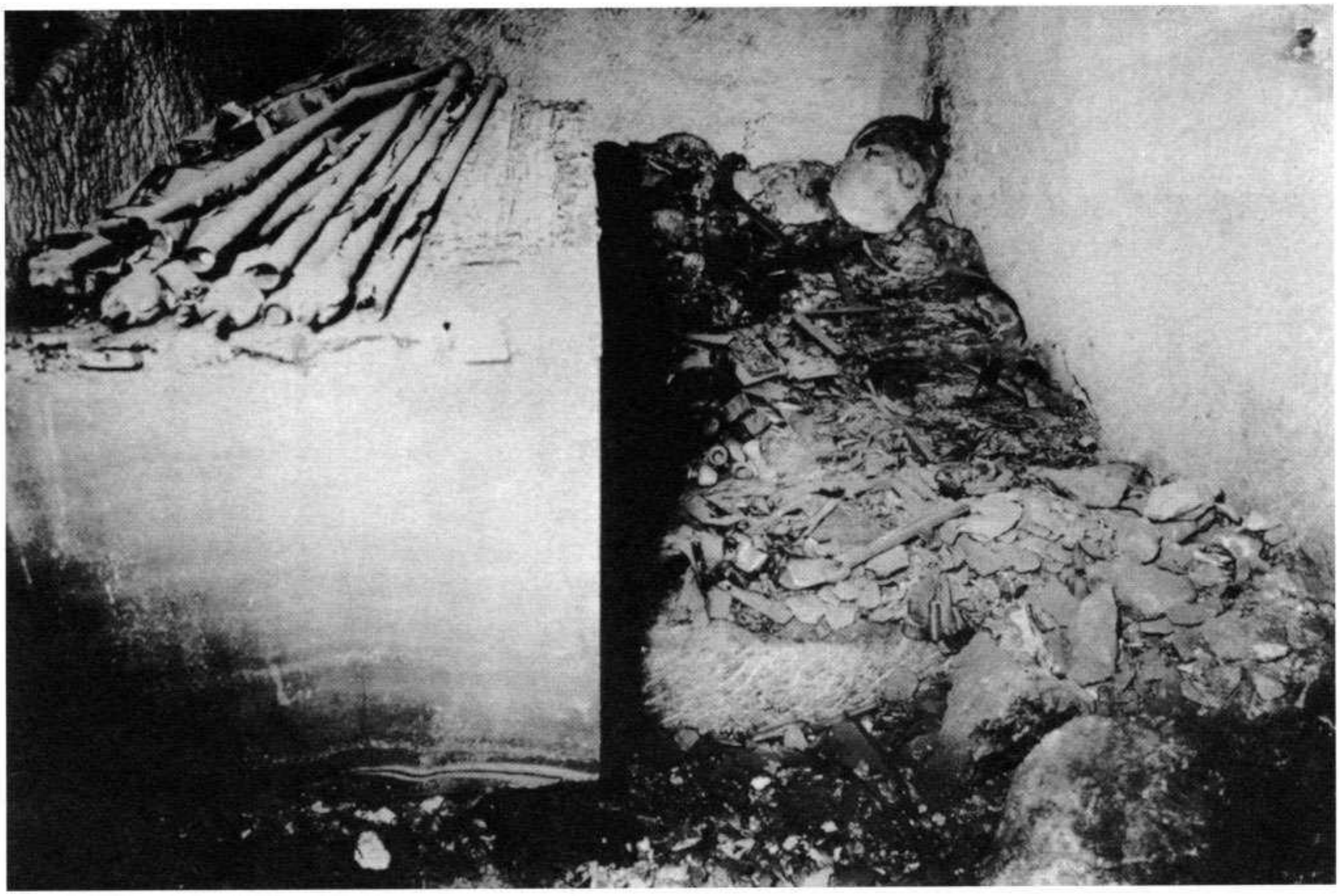
b



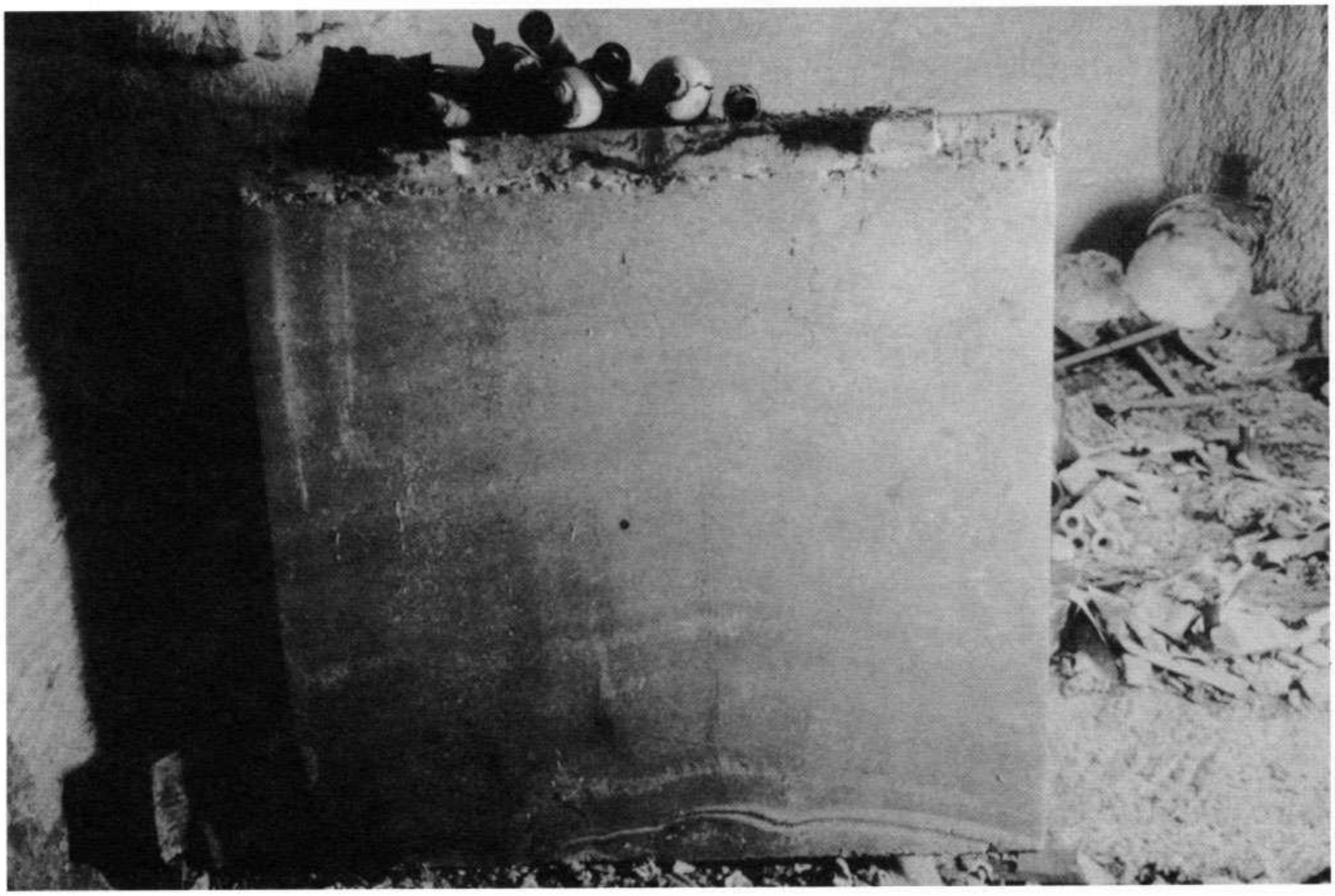
c



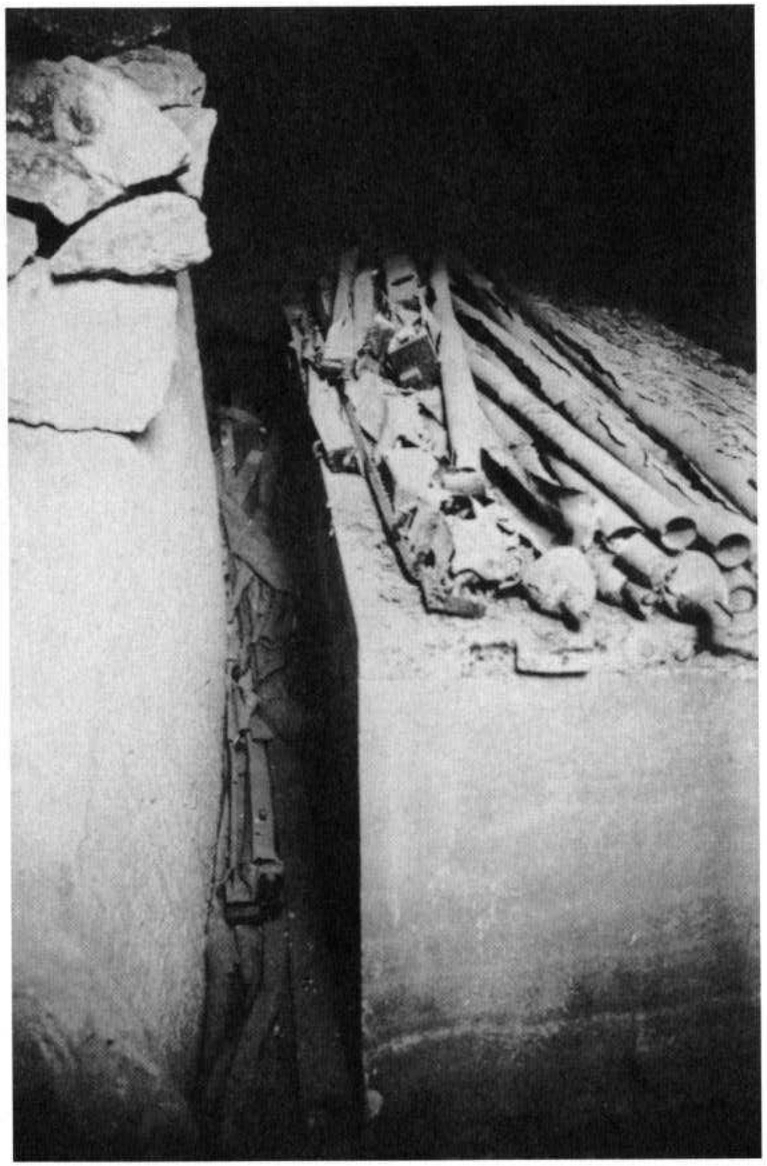
d



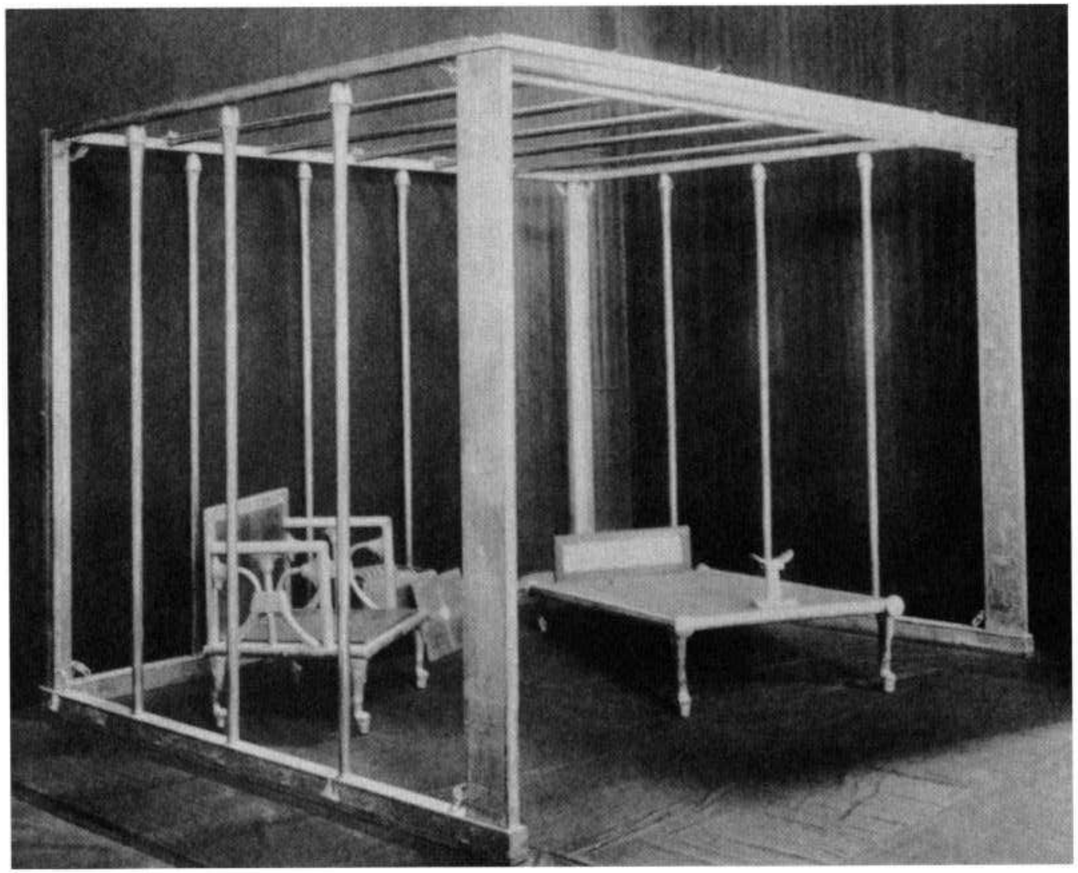
a



b

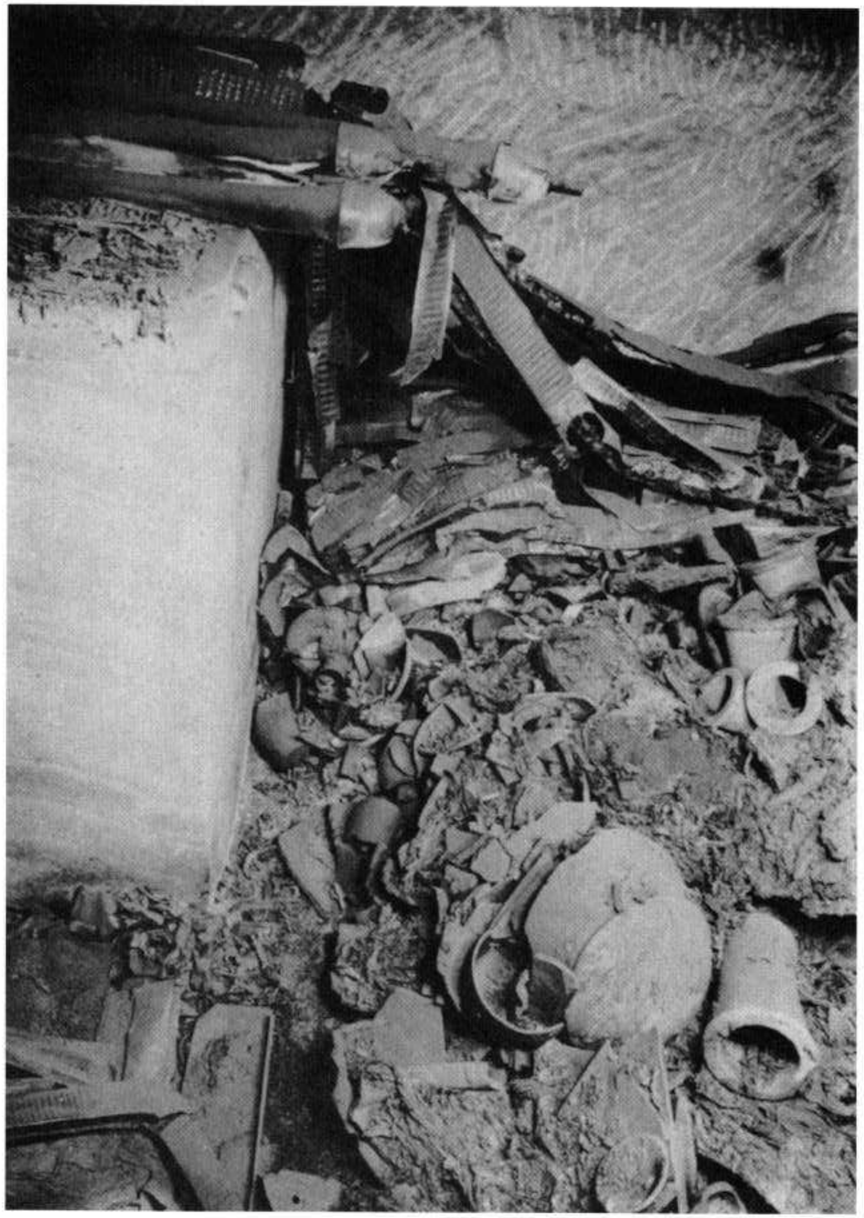


a

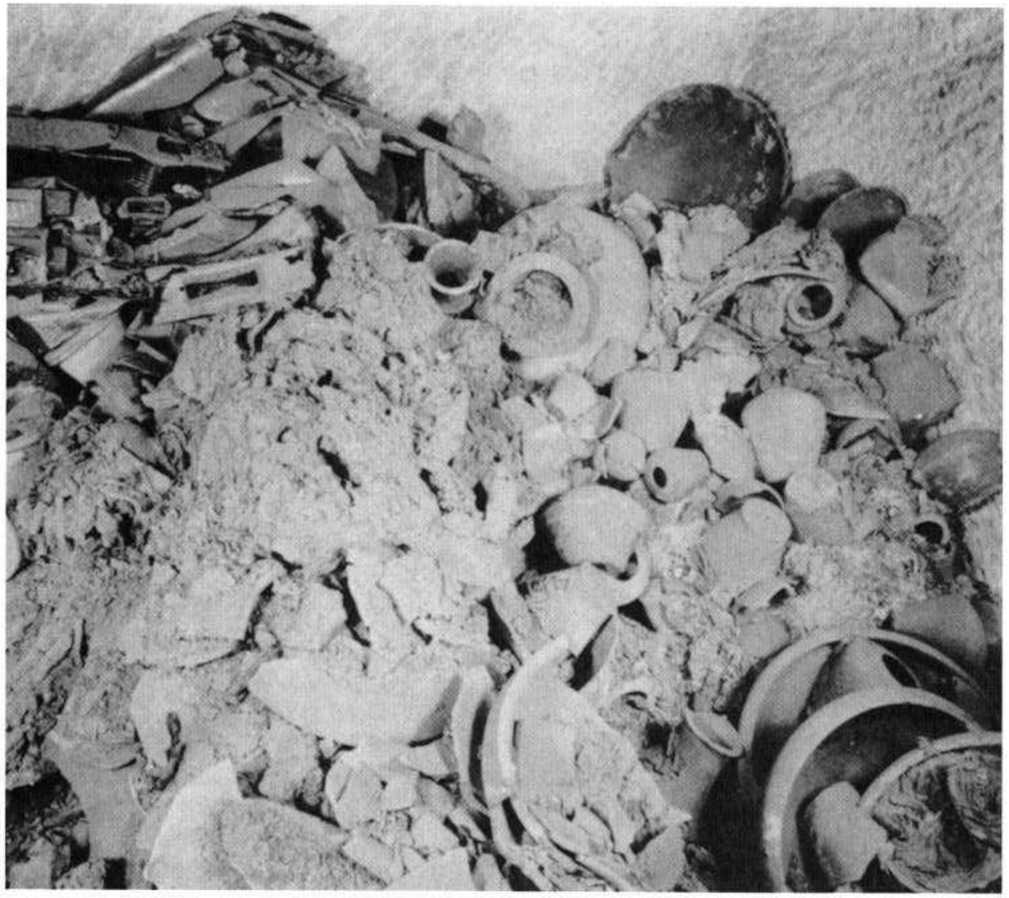


b

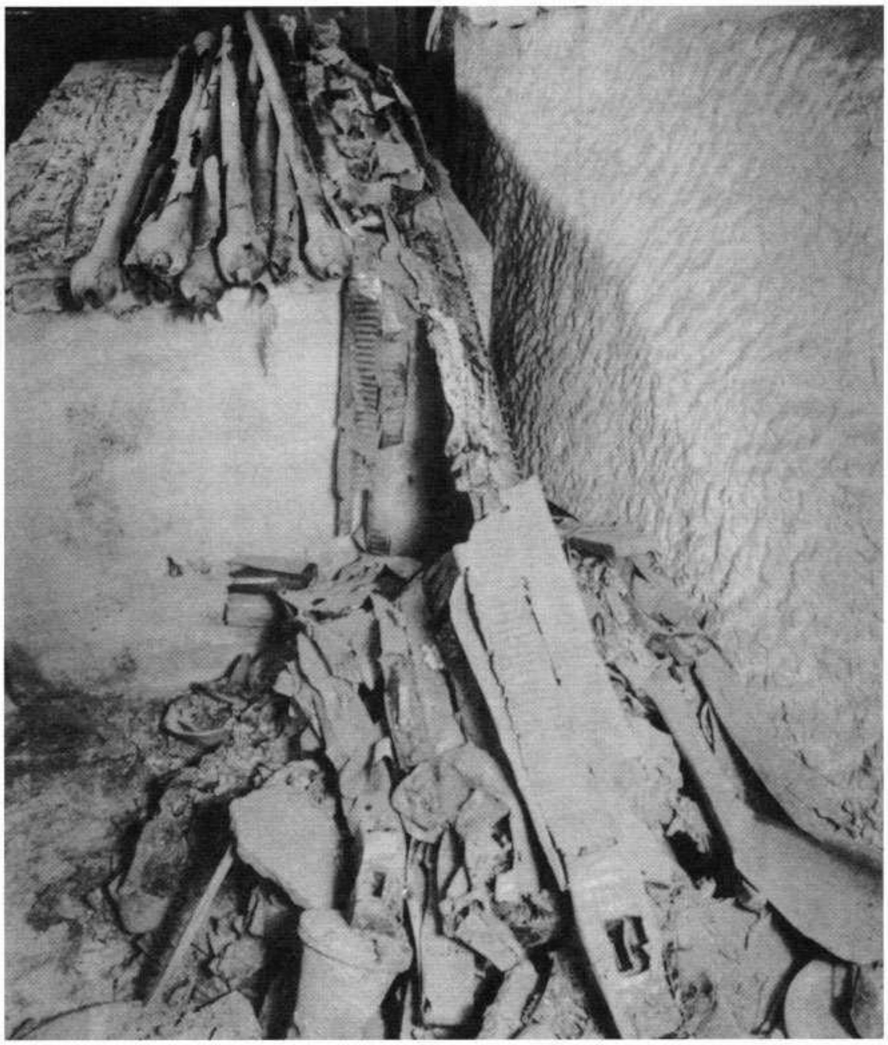
[9]



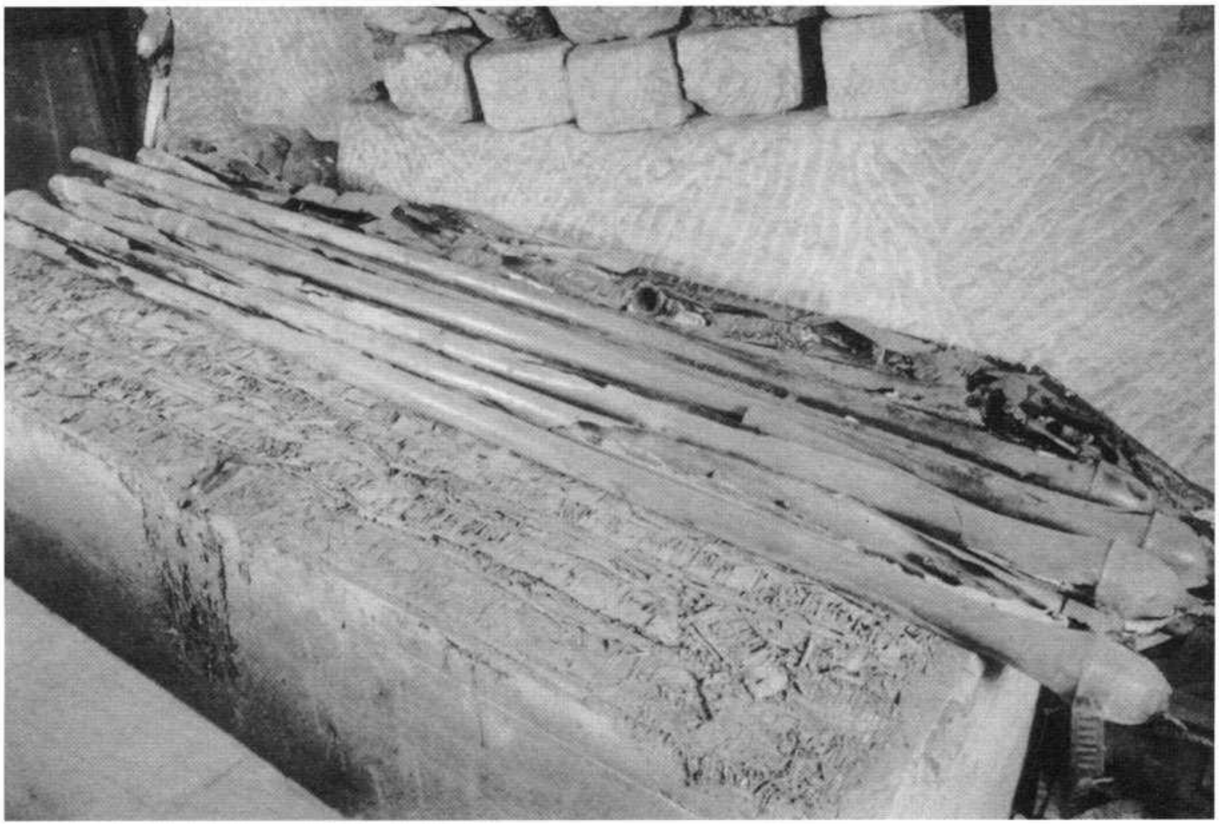
a



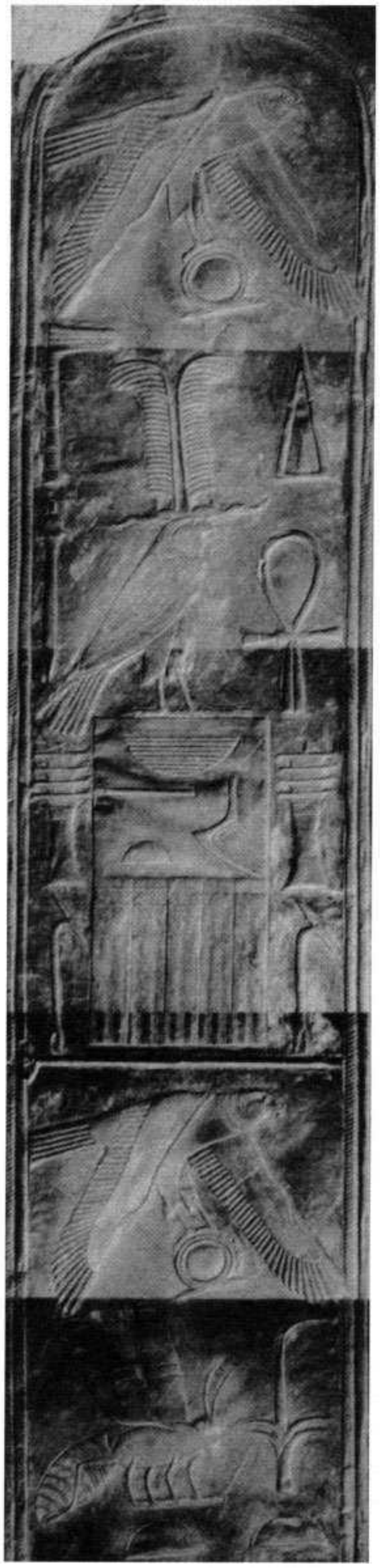
b



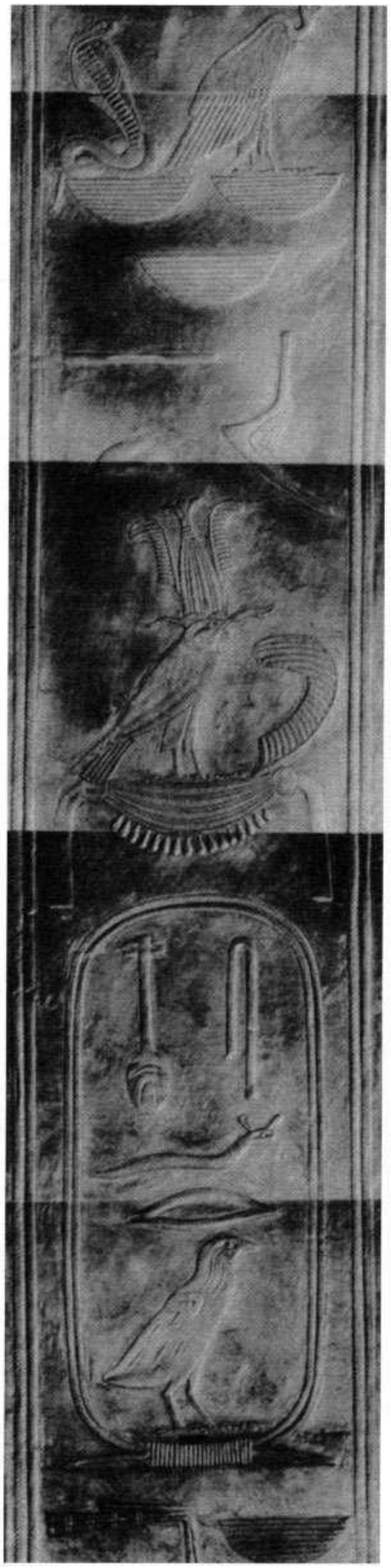
a



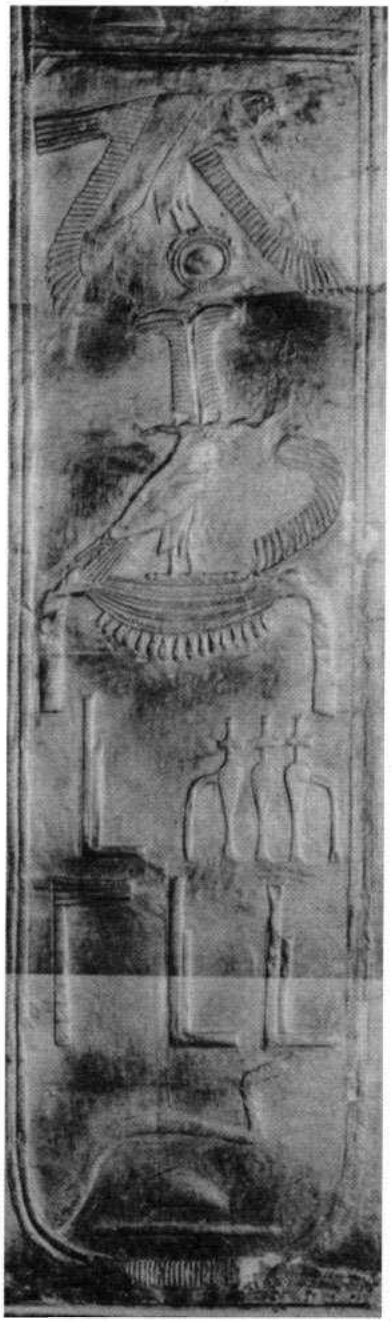
b



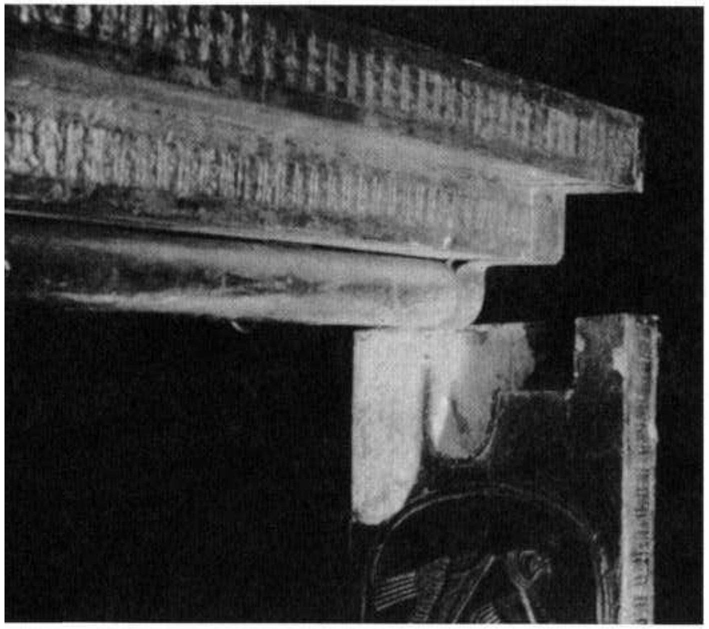
a



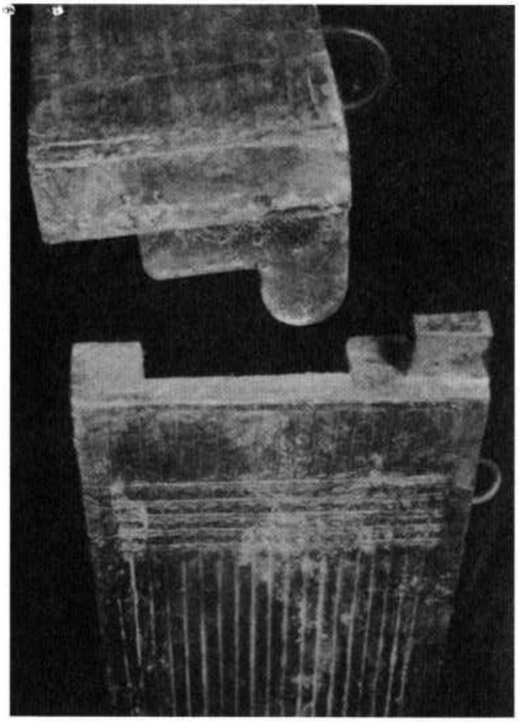
b



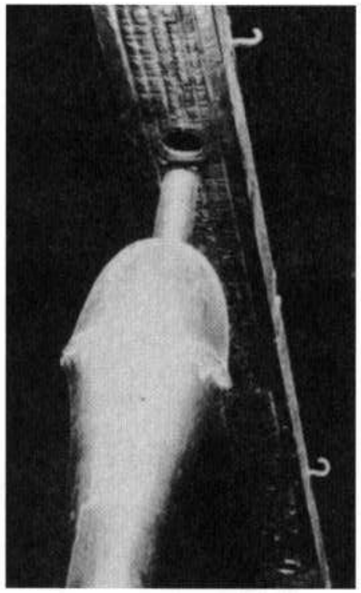
c



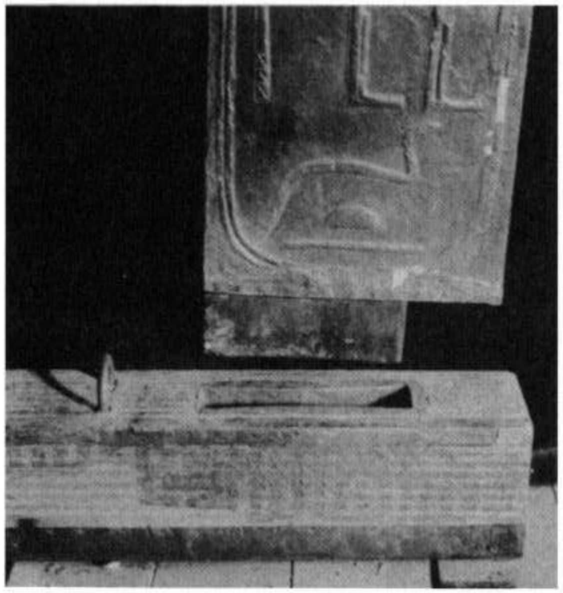
a



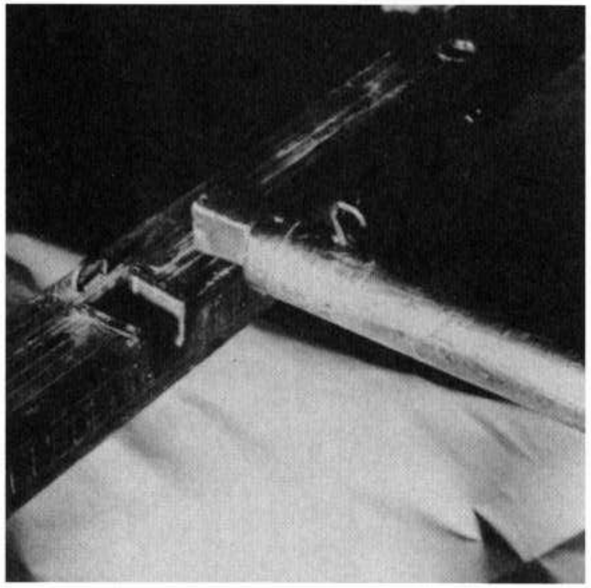
b



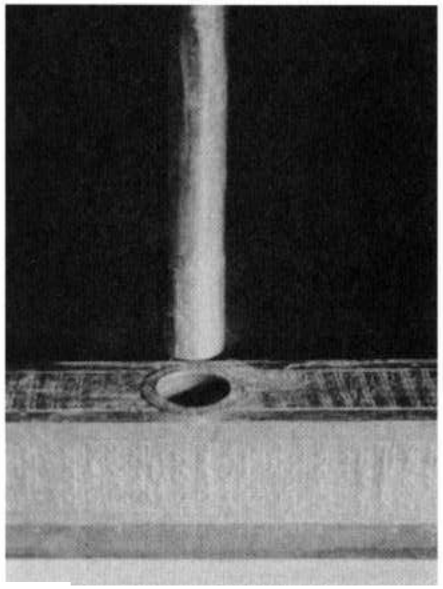
c



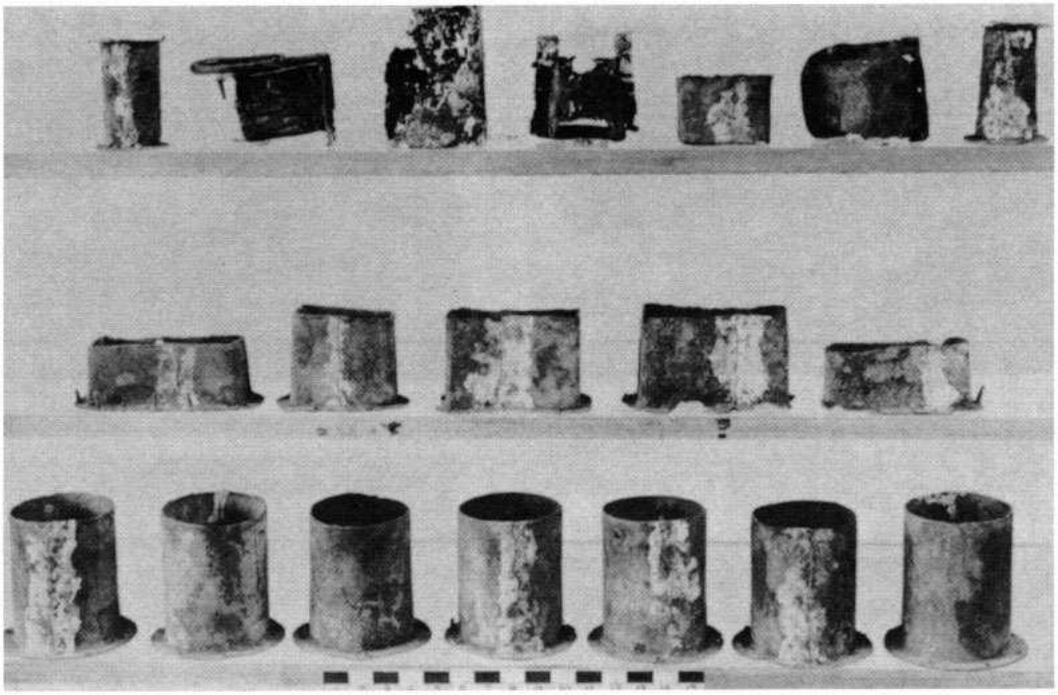
d



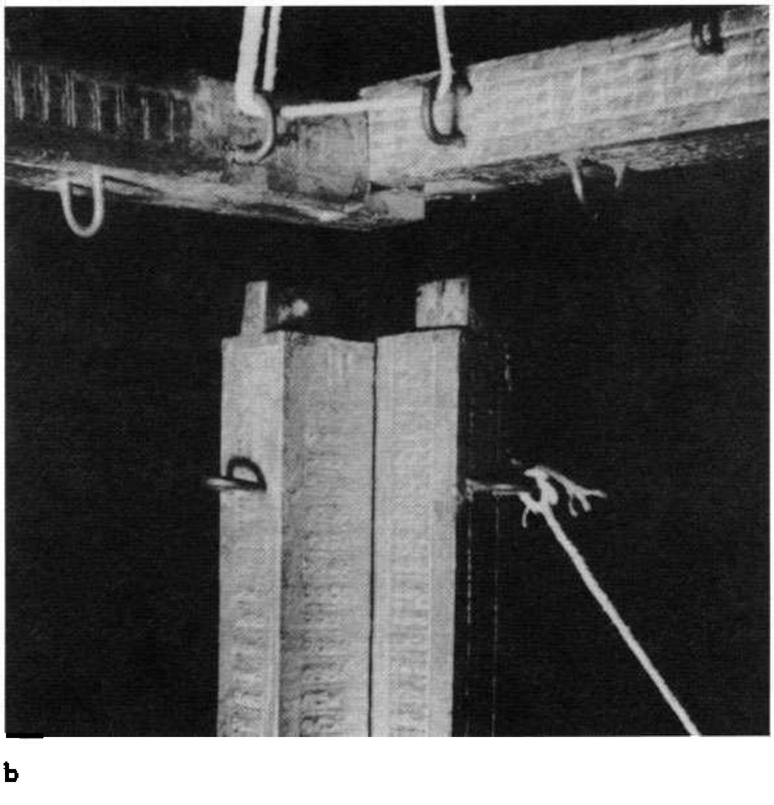
e



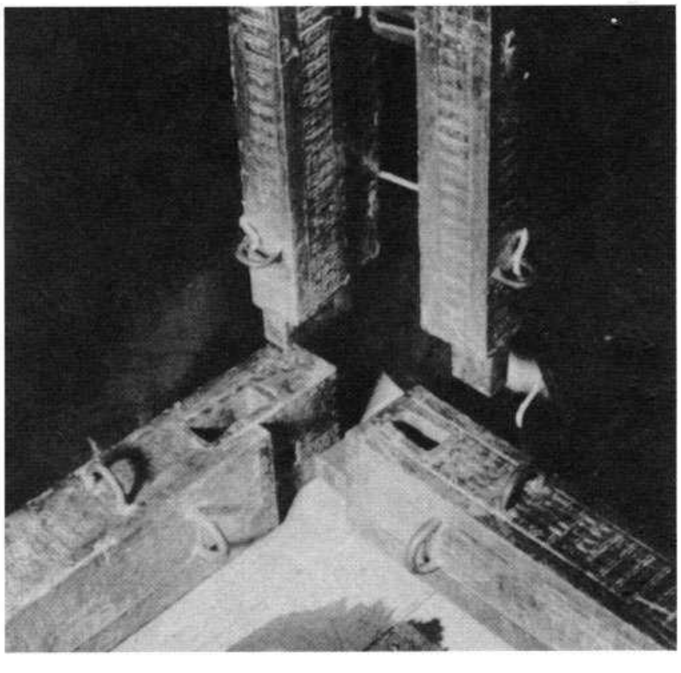
f



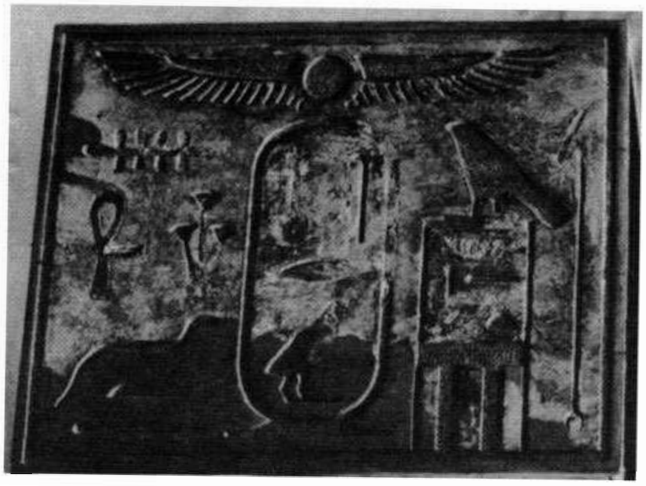
a



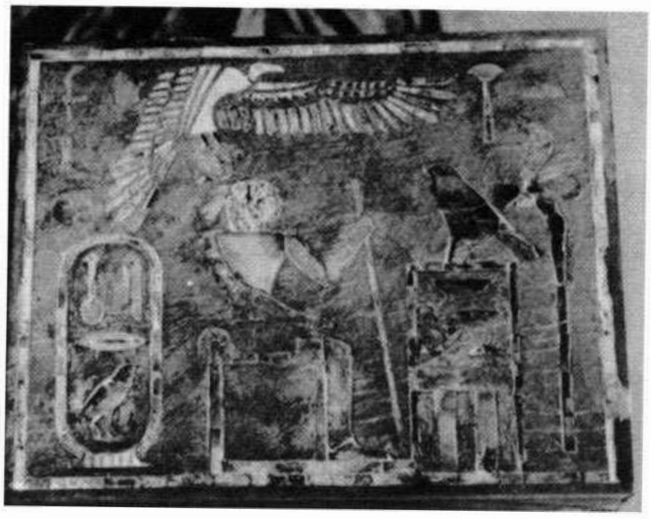
b



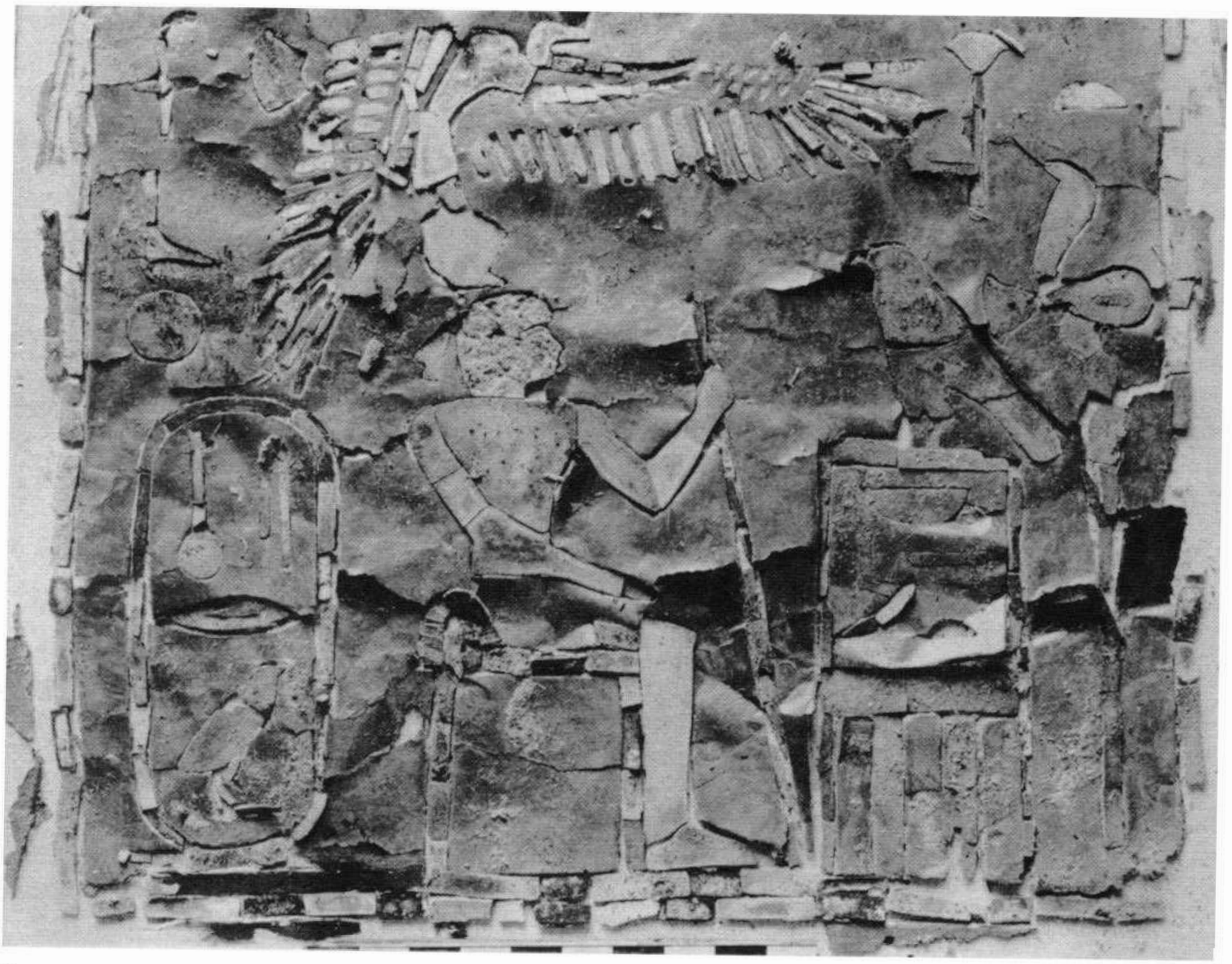
c



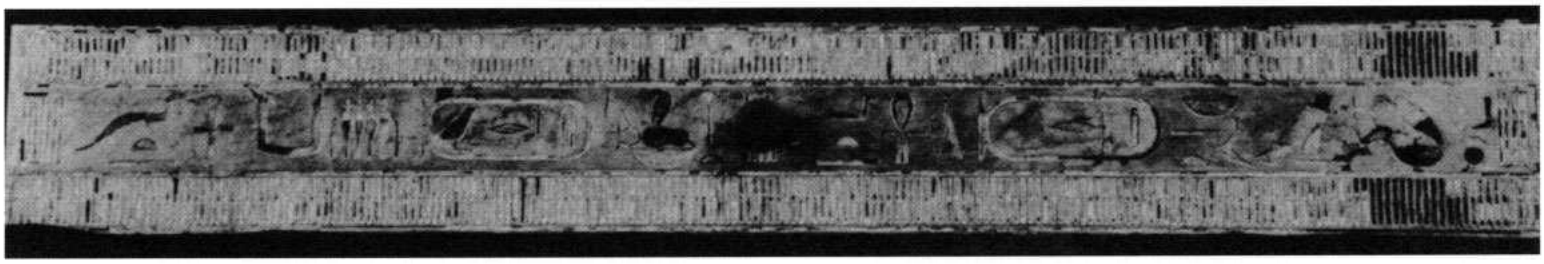
a



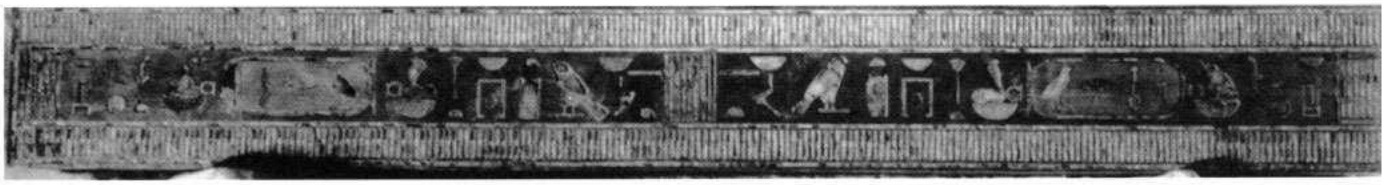
b



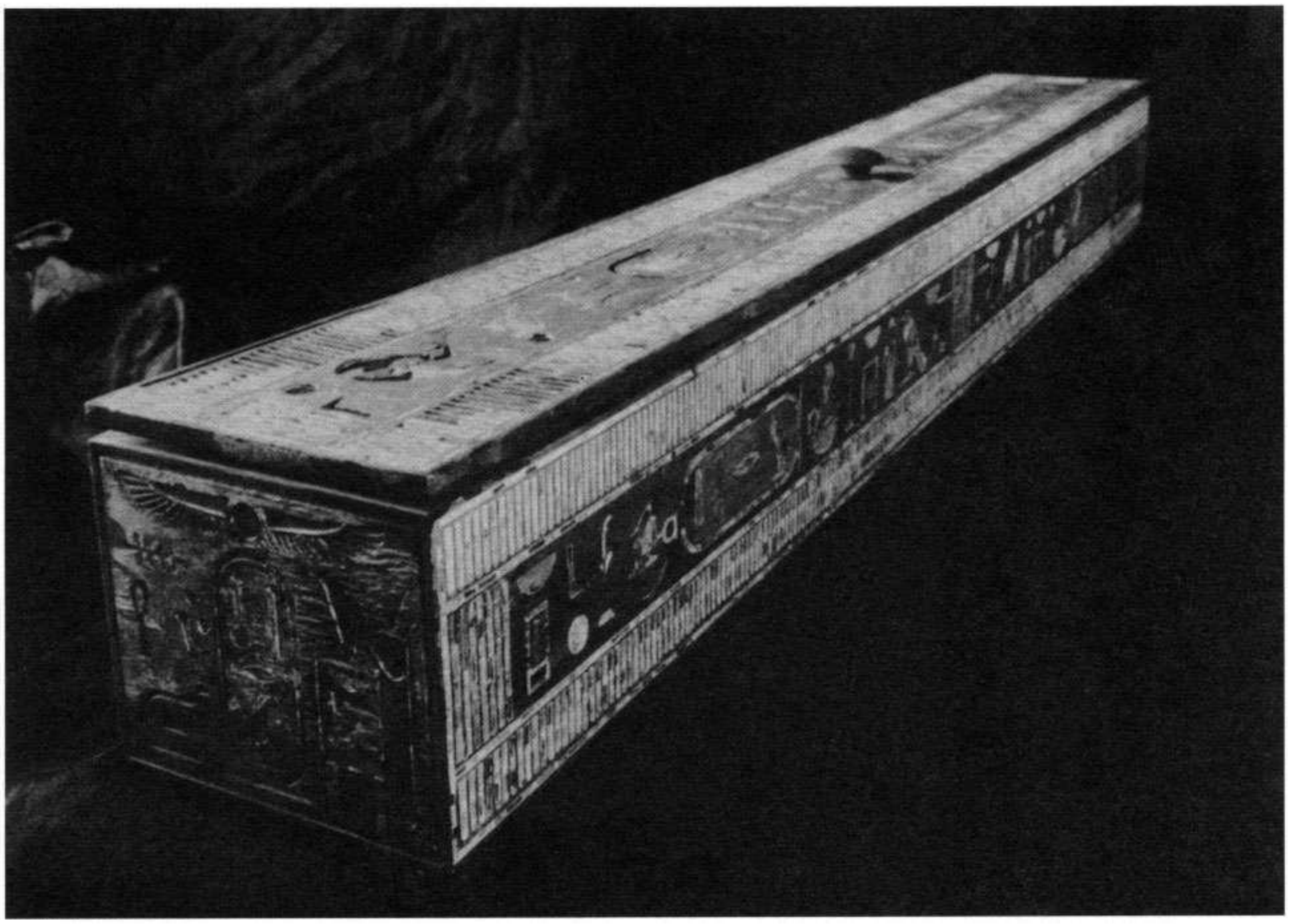
c



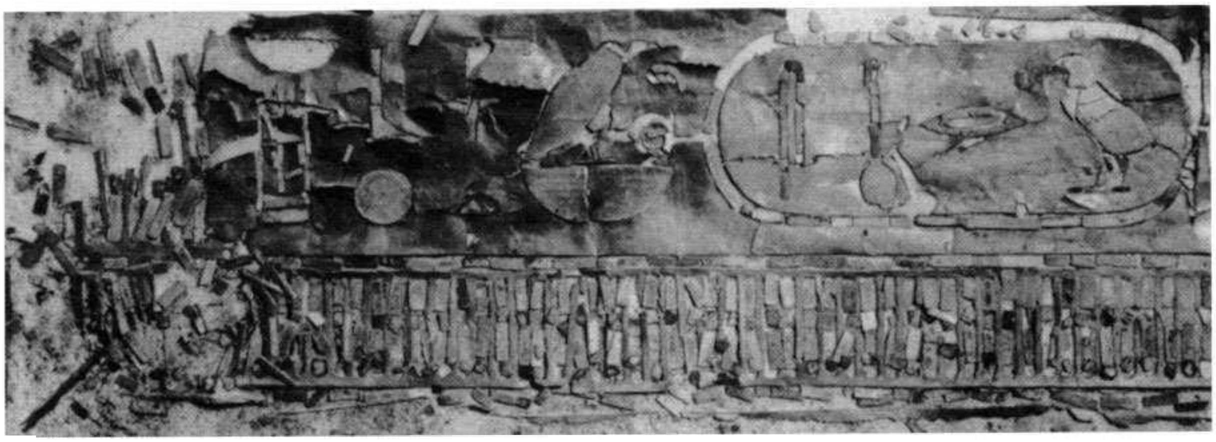
a



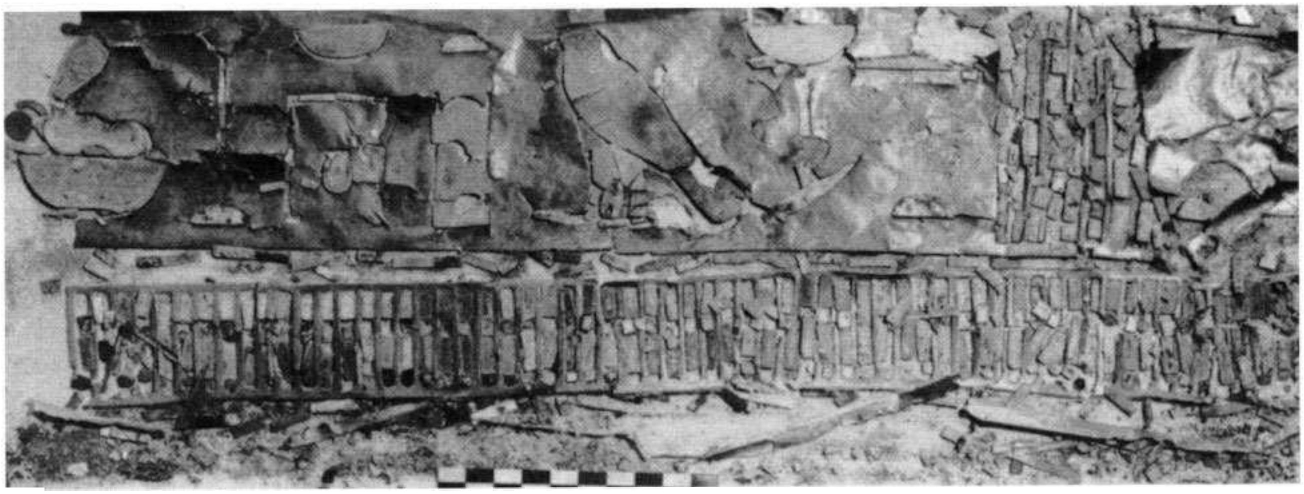
b



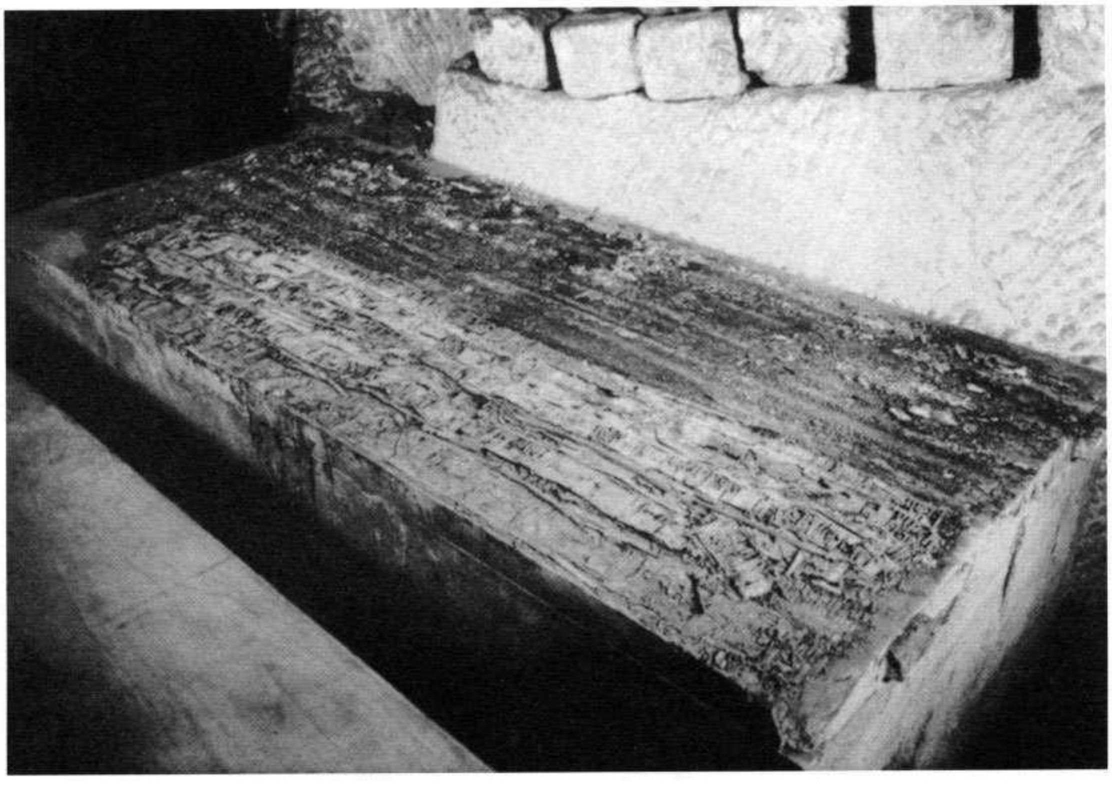
c



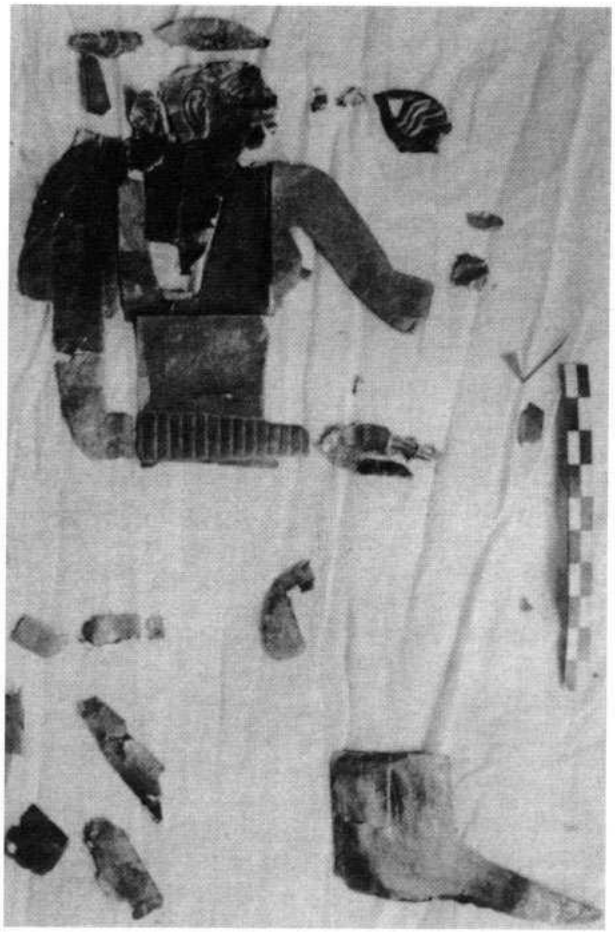
a



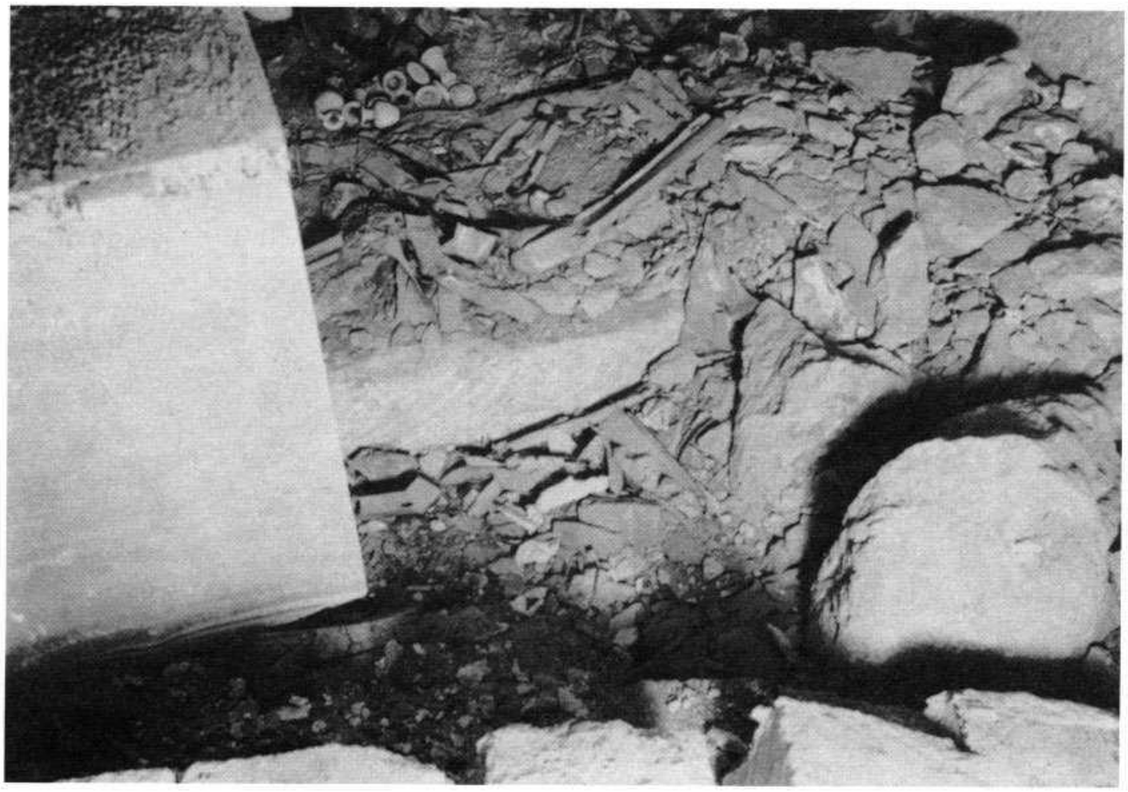
b

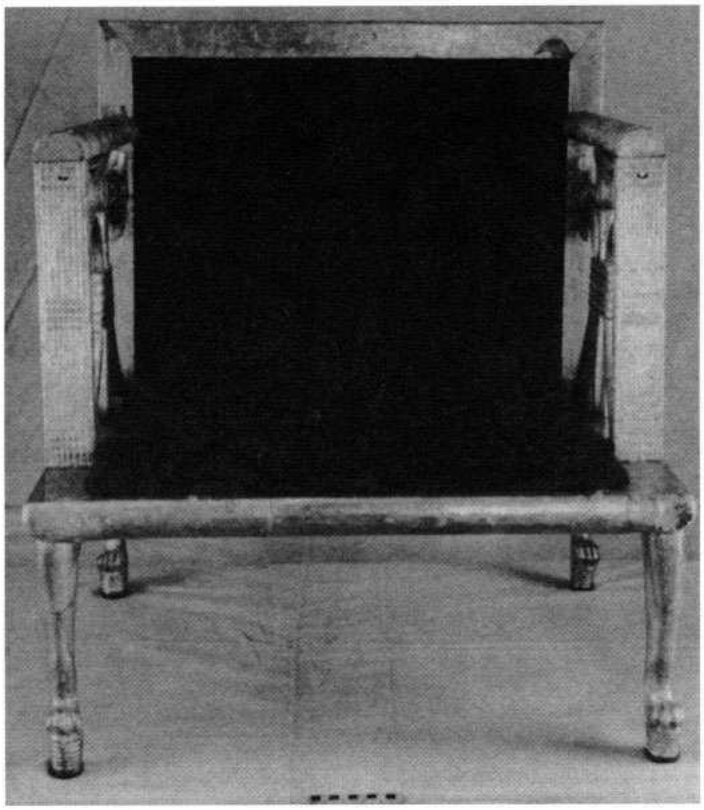


c

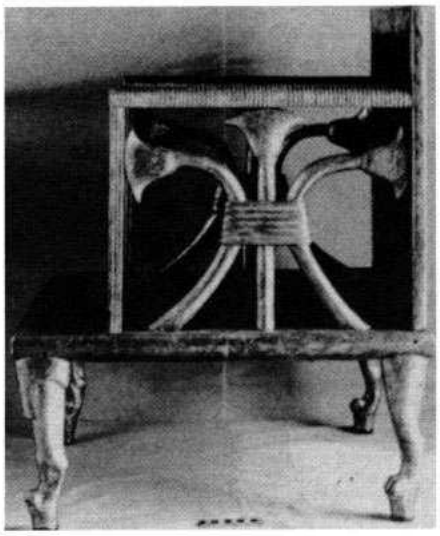

a

b

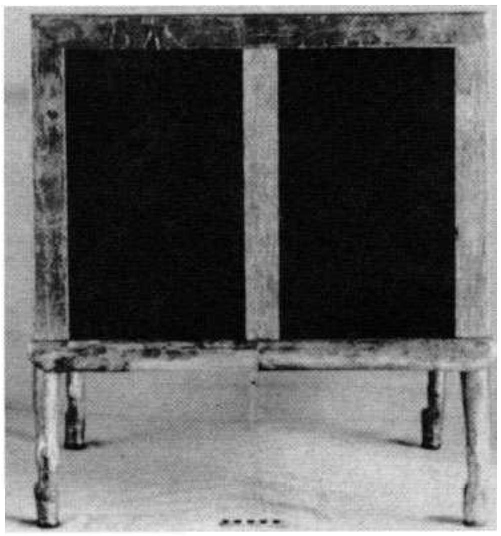

c



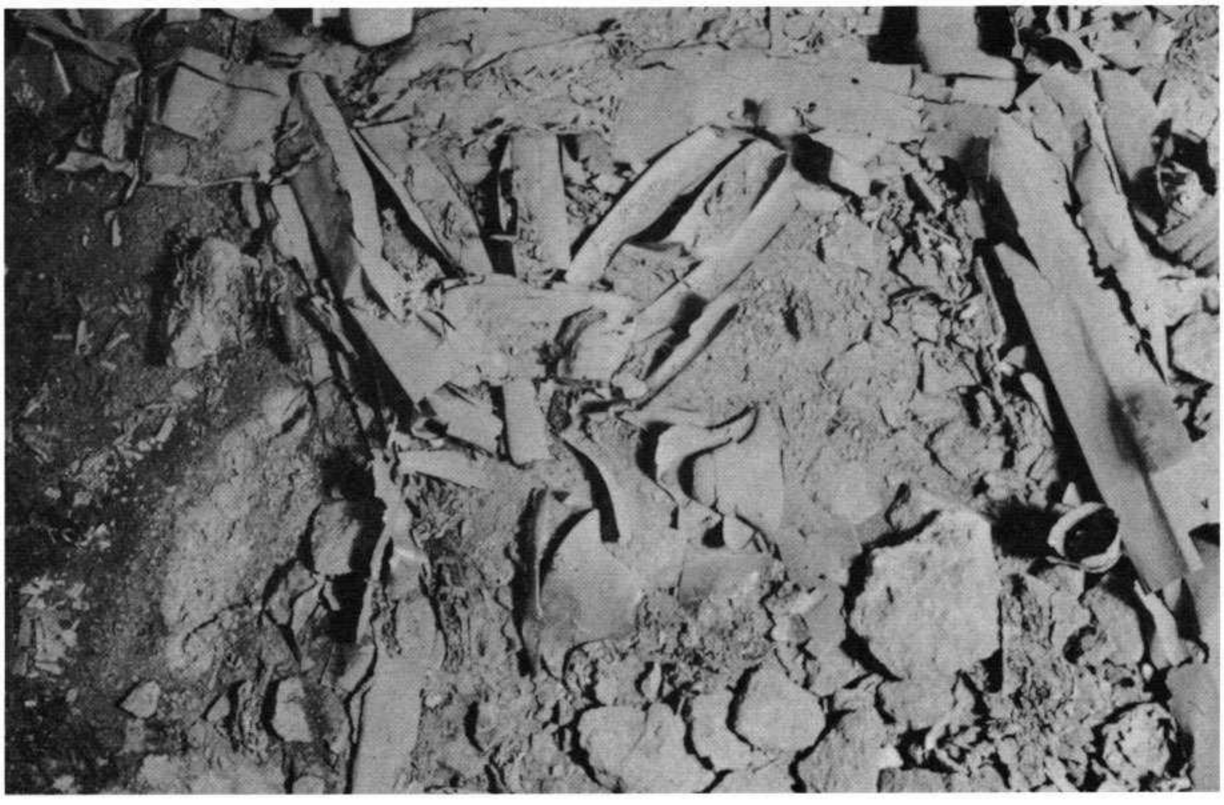
a



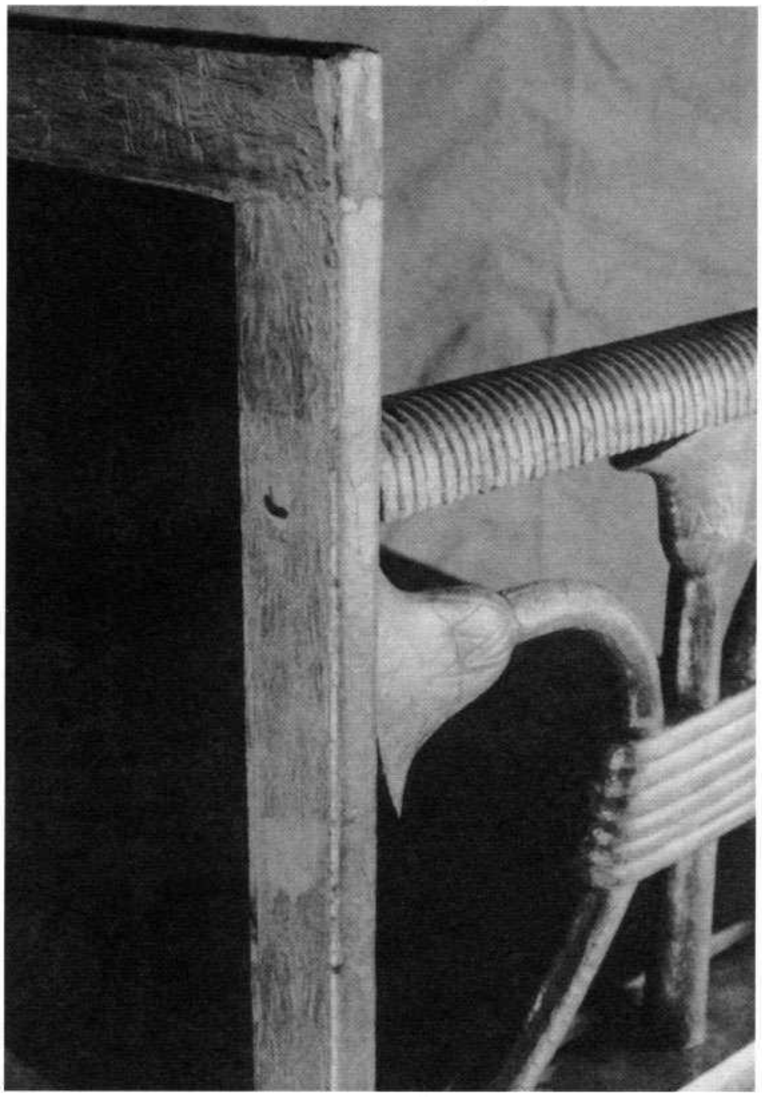
b



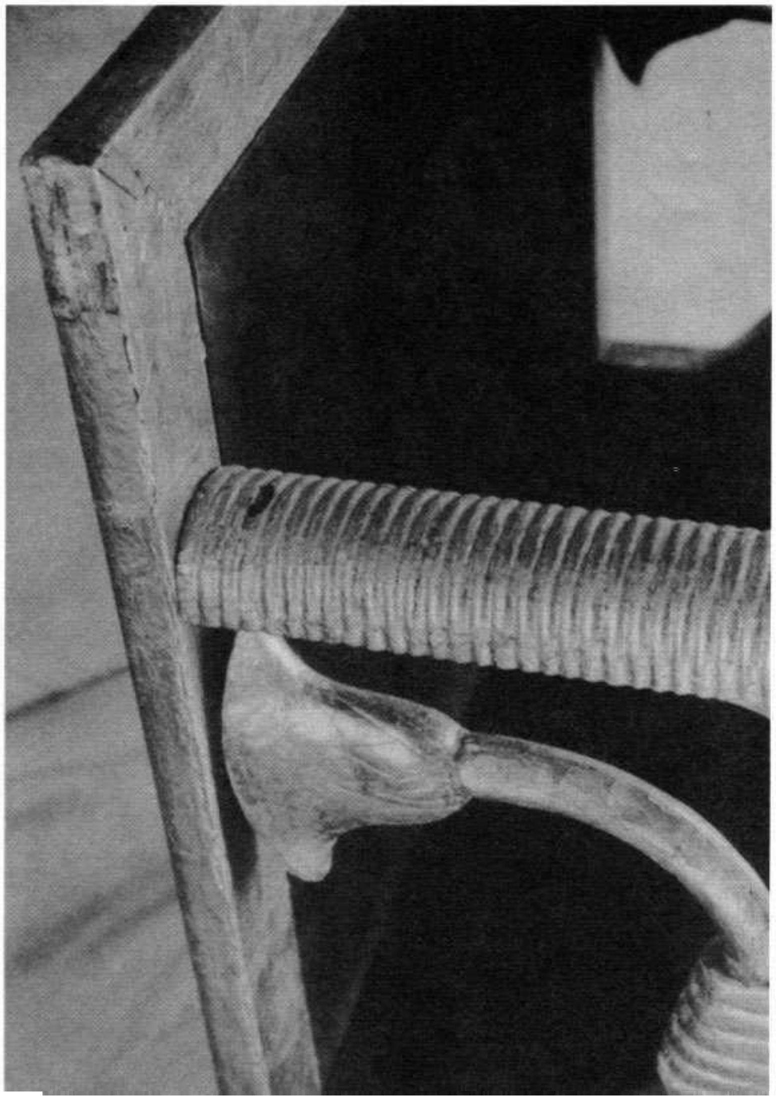
c



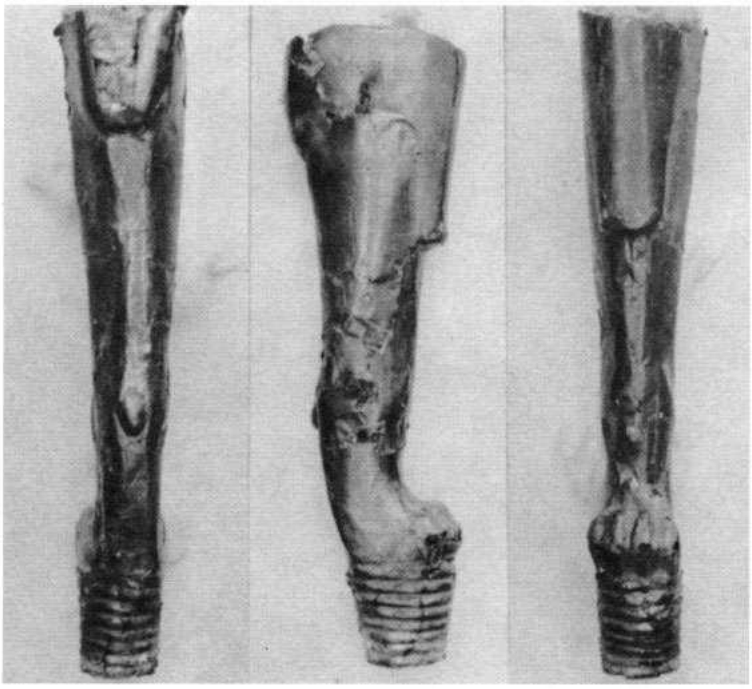
d



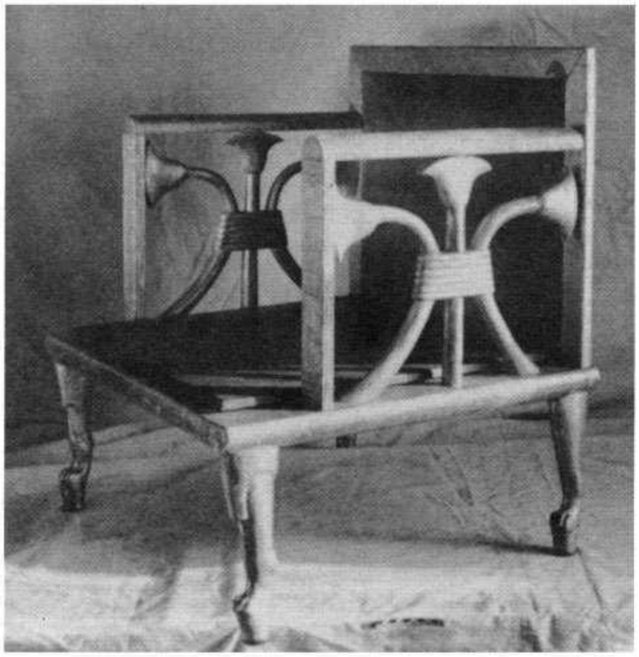
a



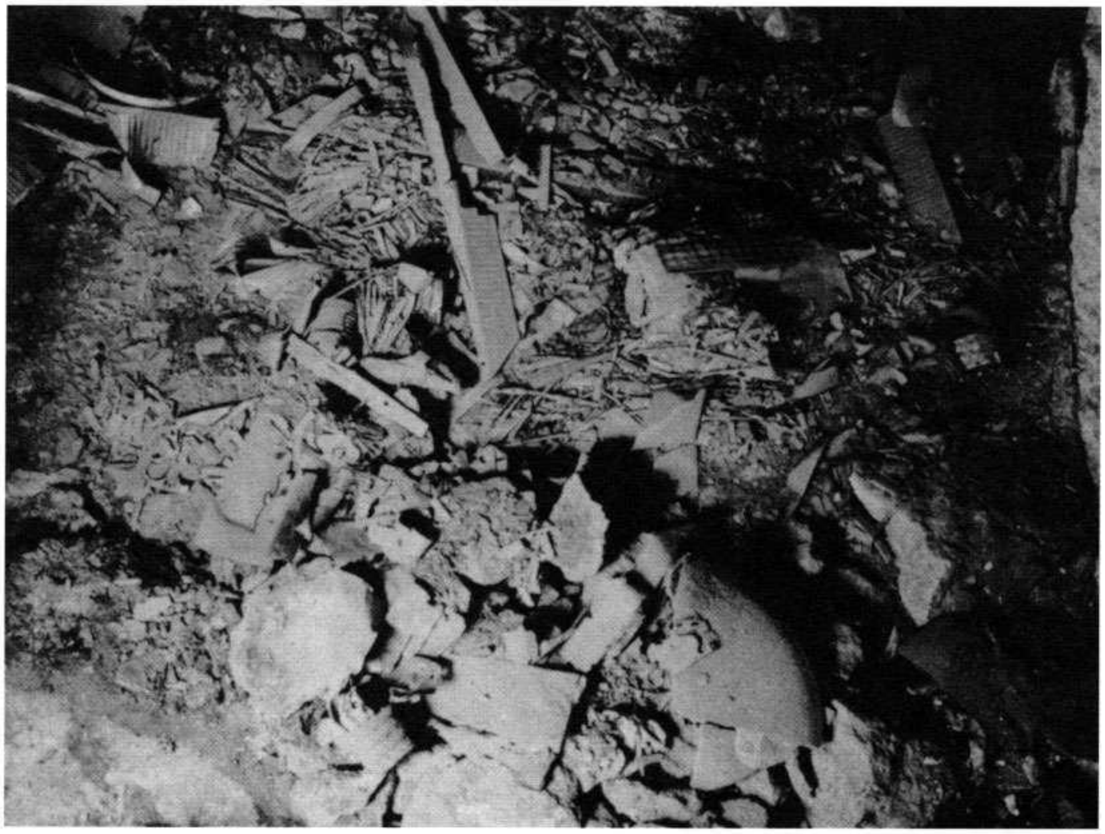
b



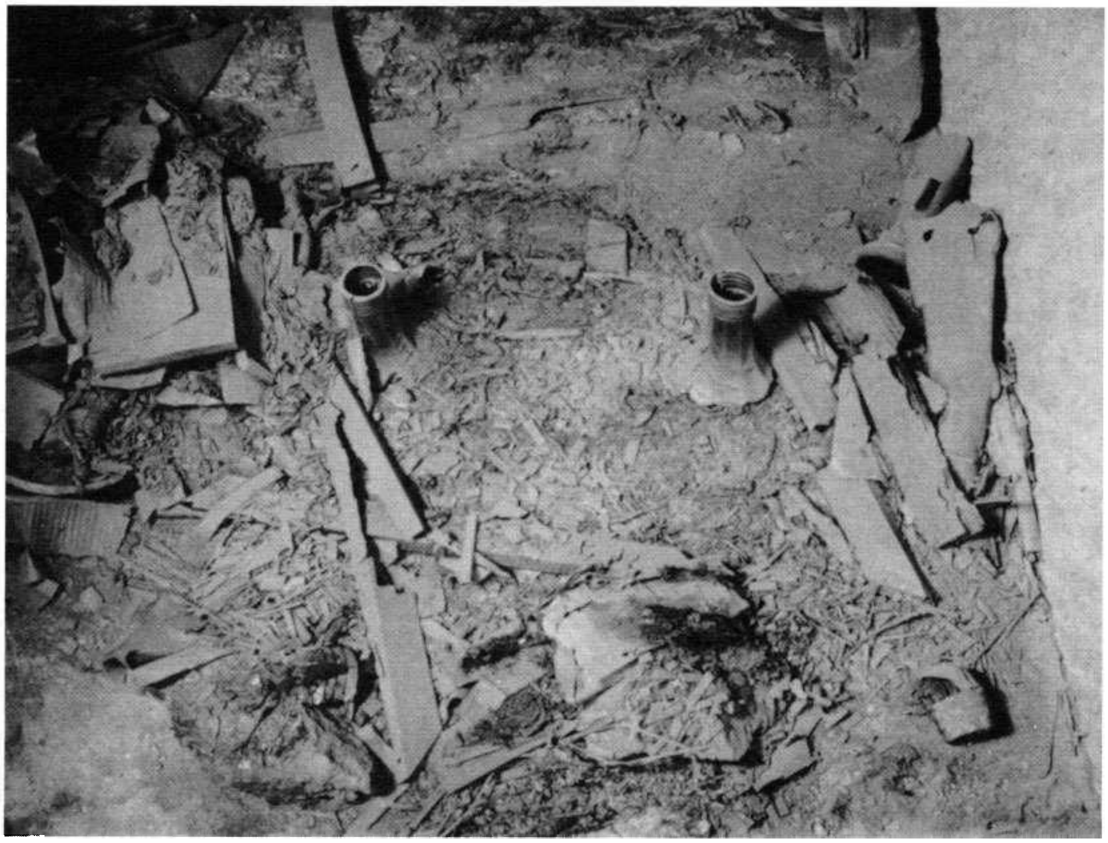
ce



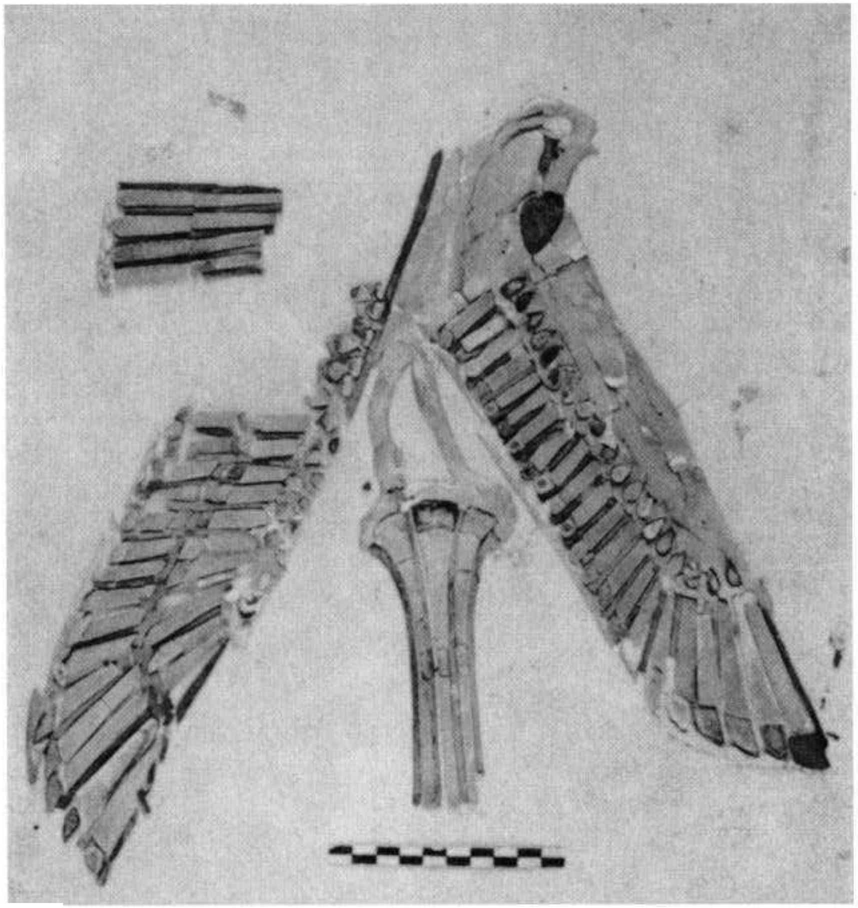
f



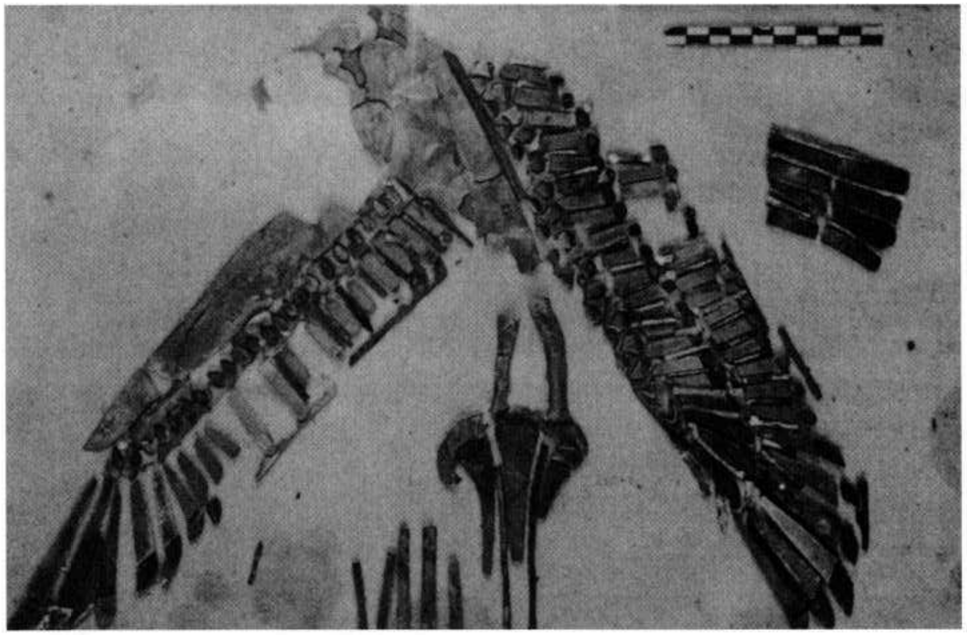
a



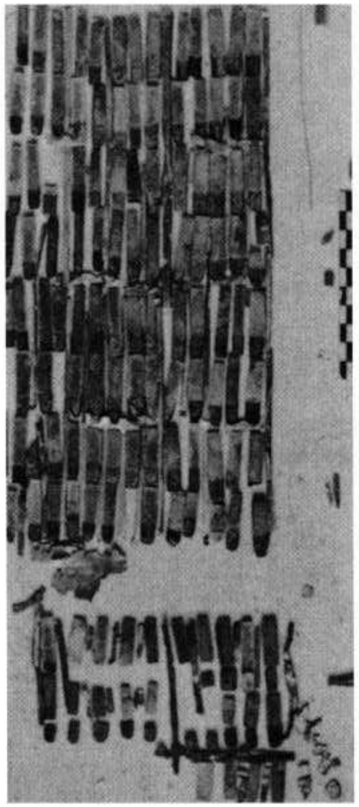
b



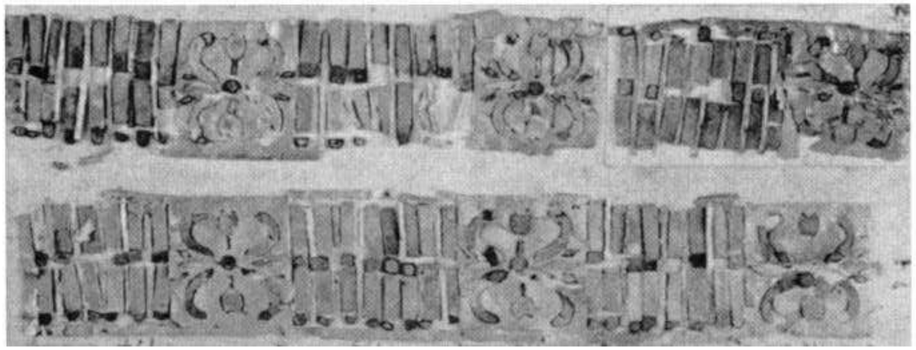
a



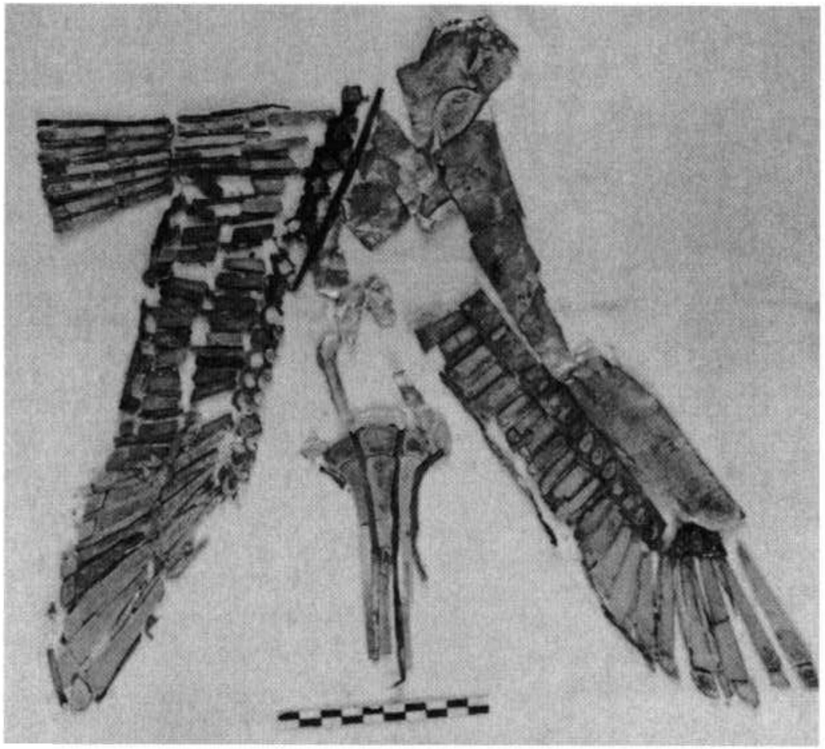
b

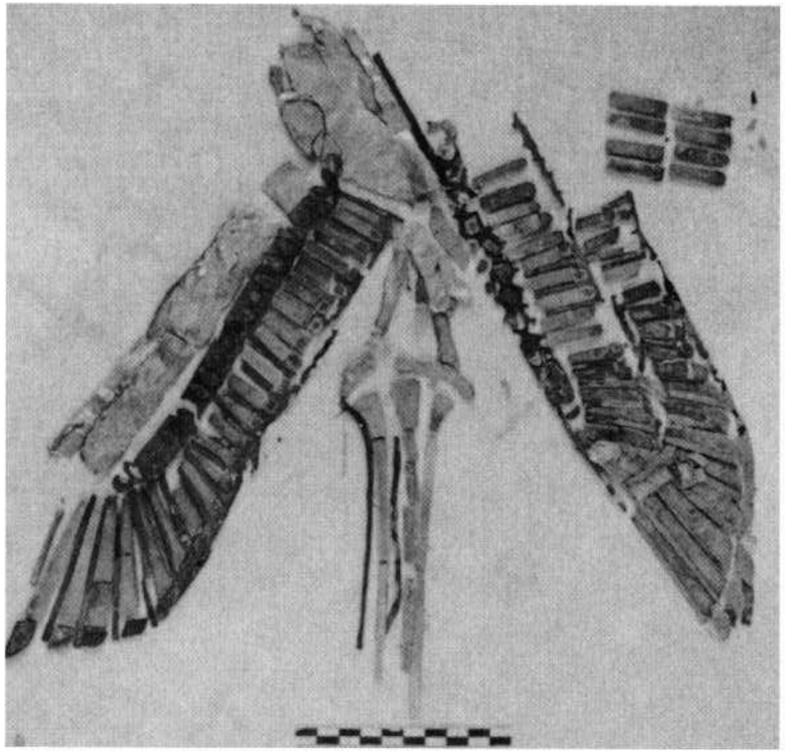


d



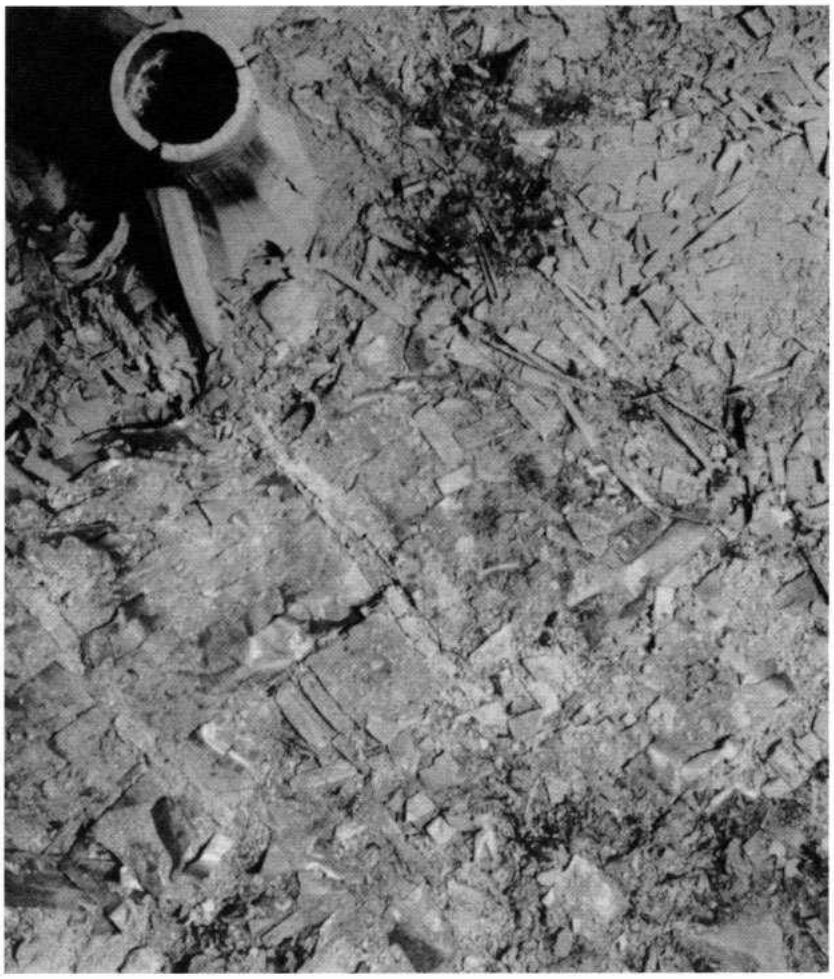
c


a


b

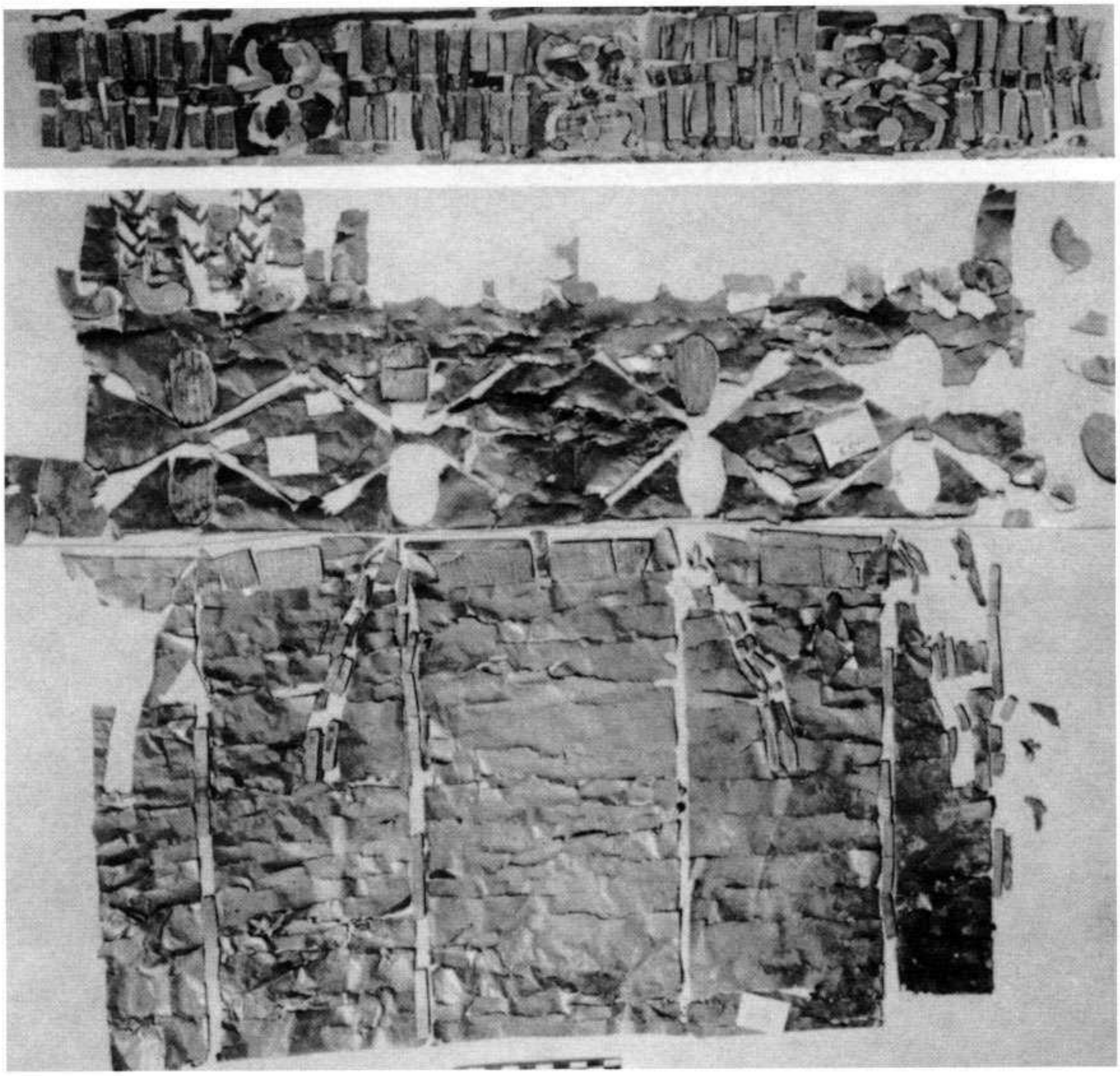
c

d



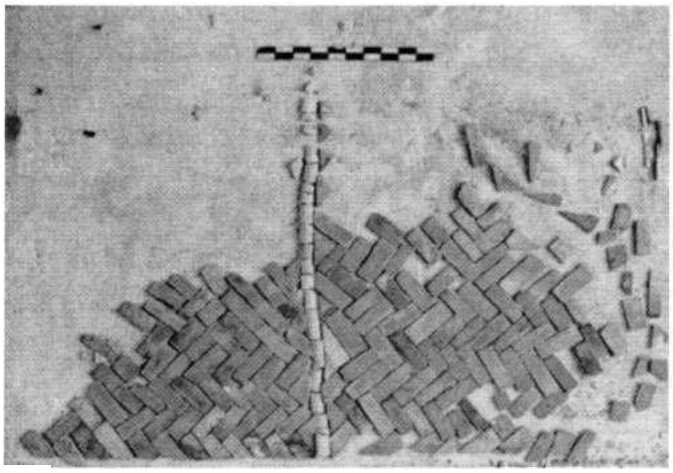
a

b

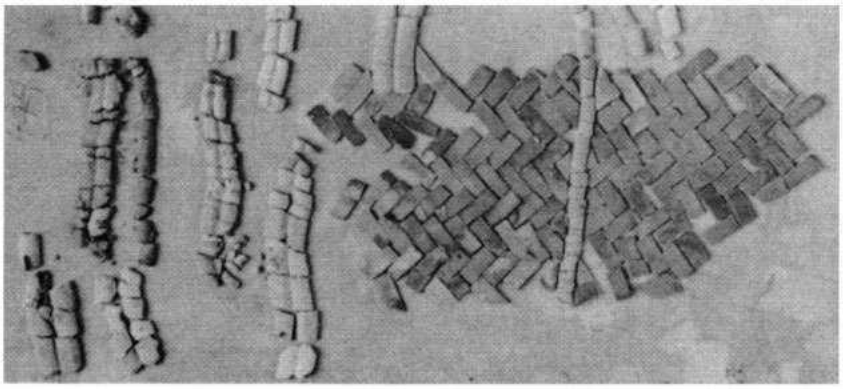


a

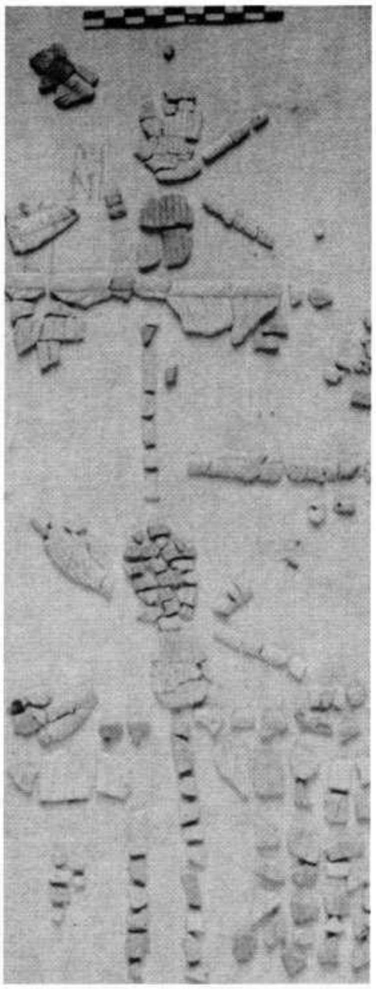
b



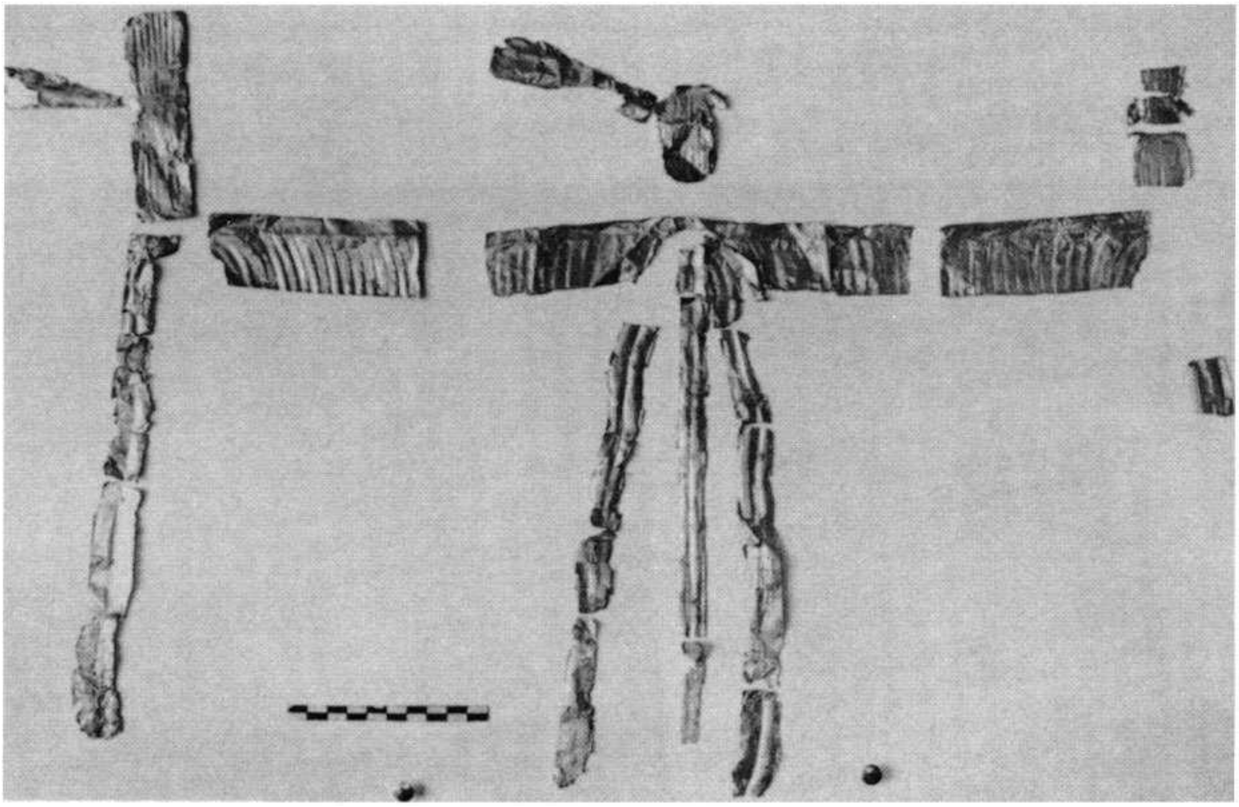
a



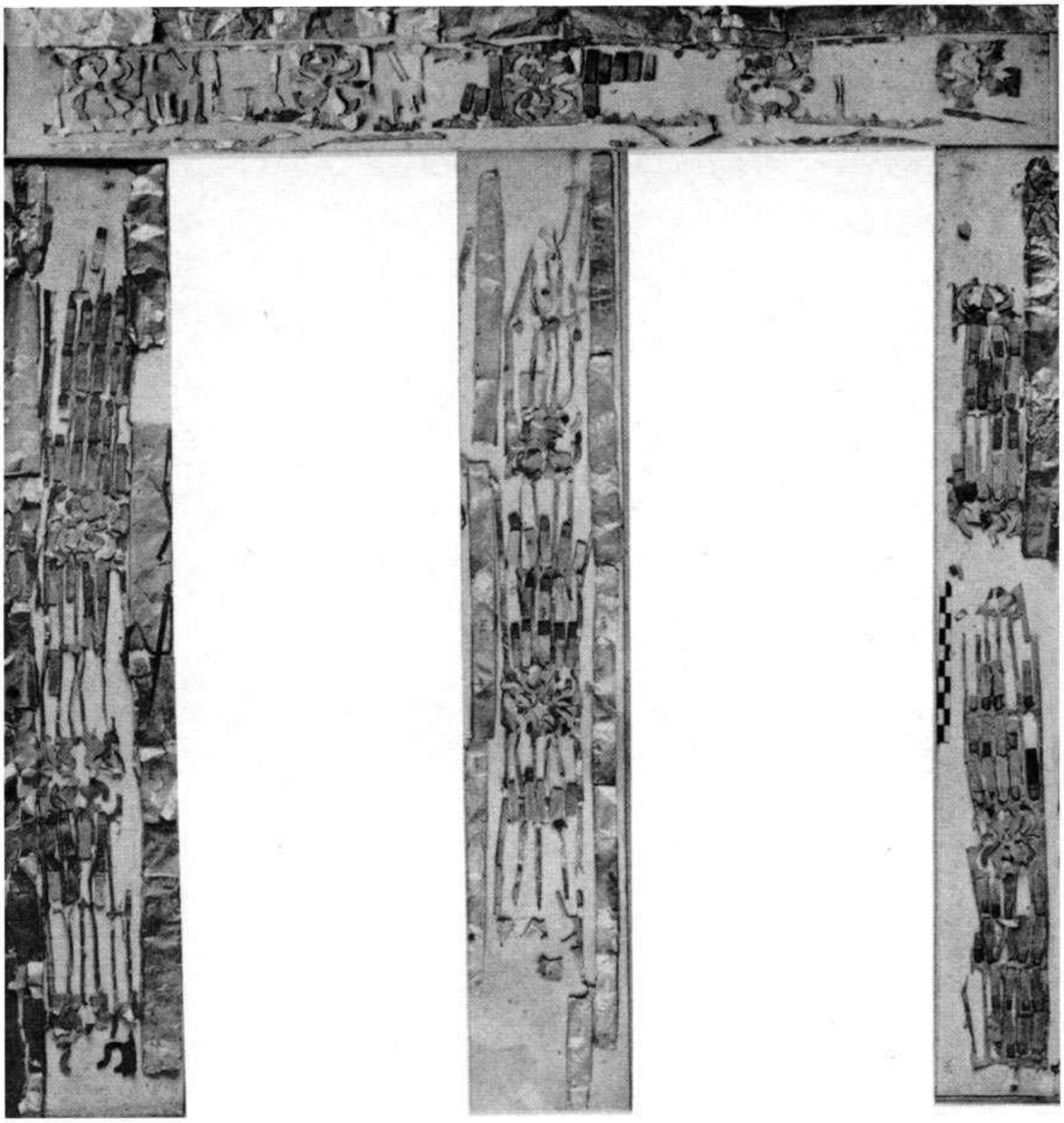
b



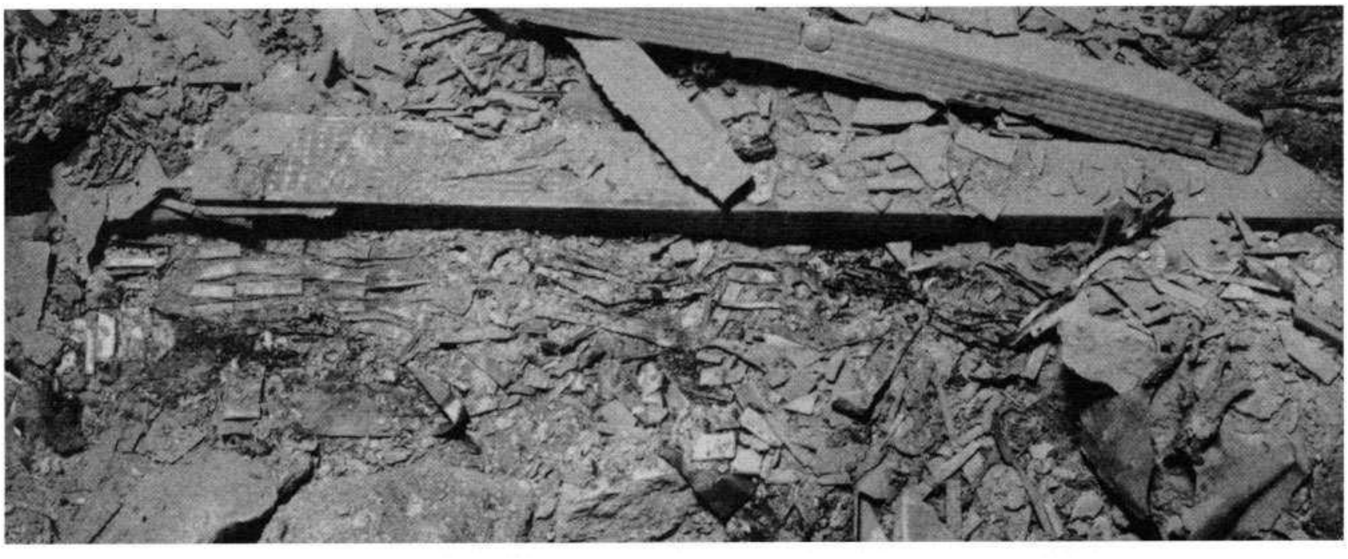
c



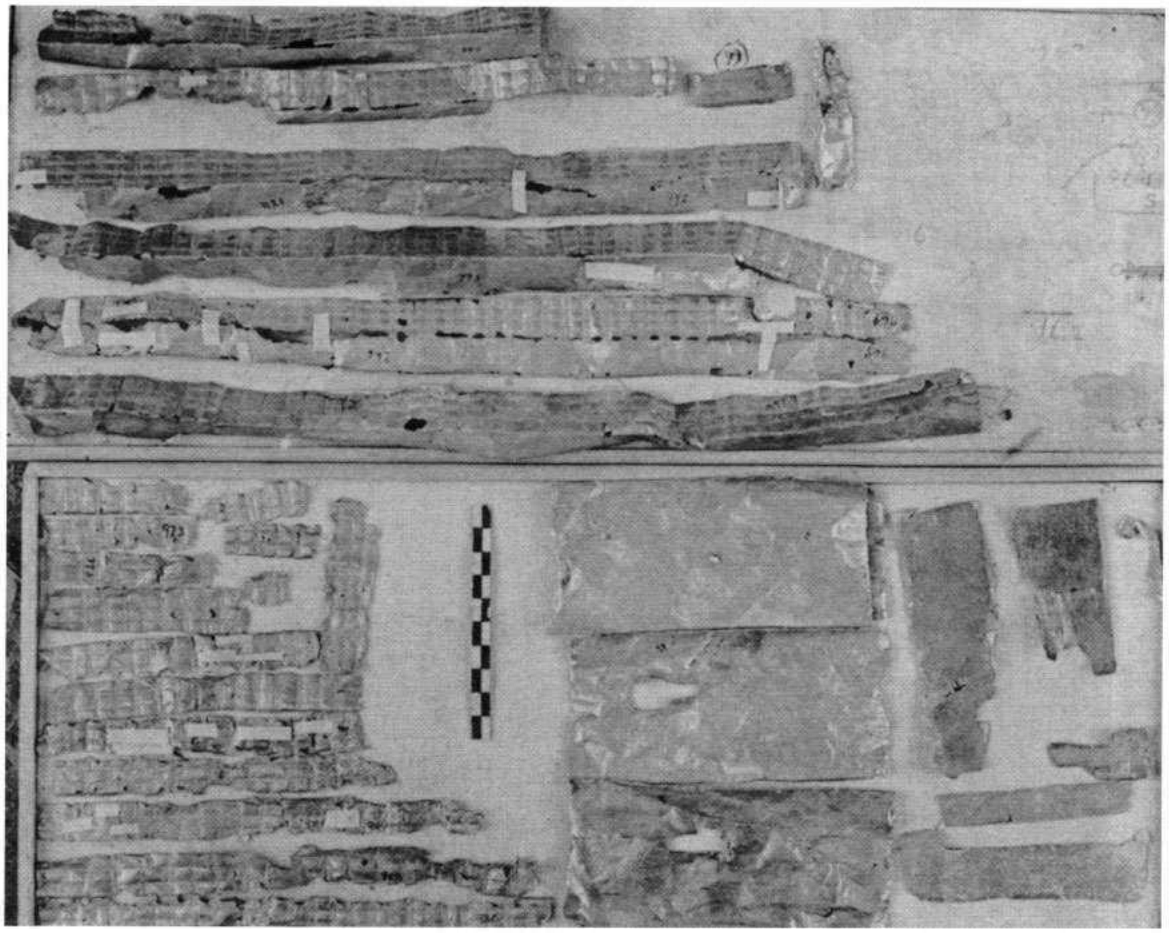
d



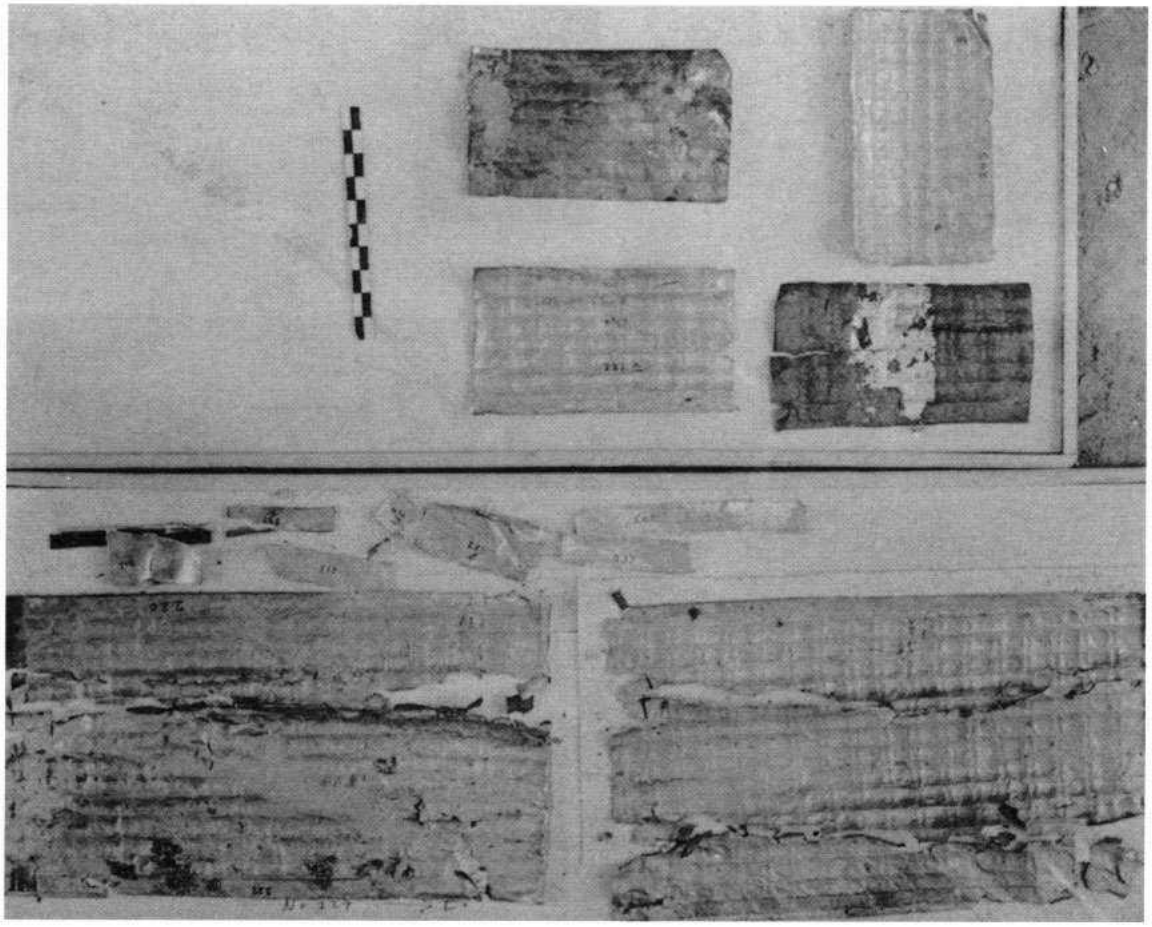
a



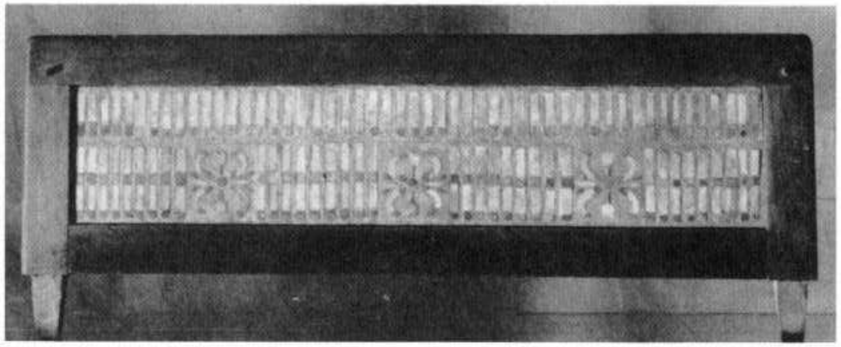
b

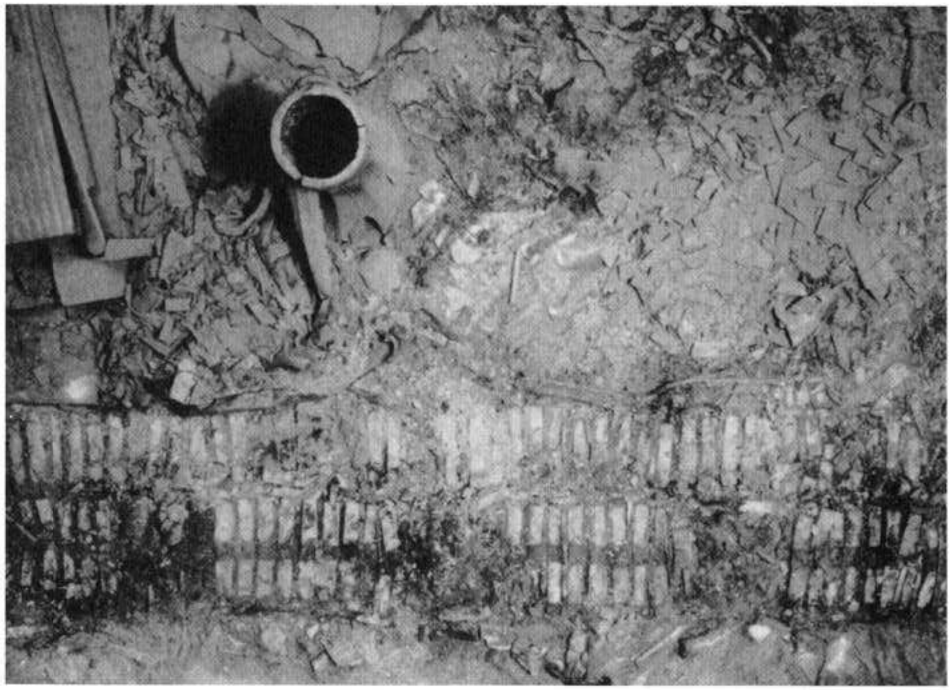


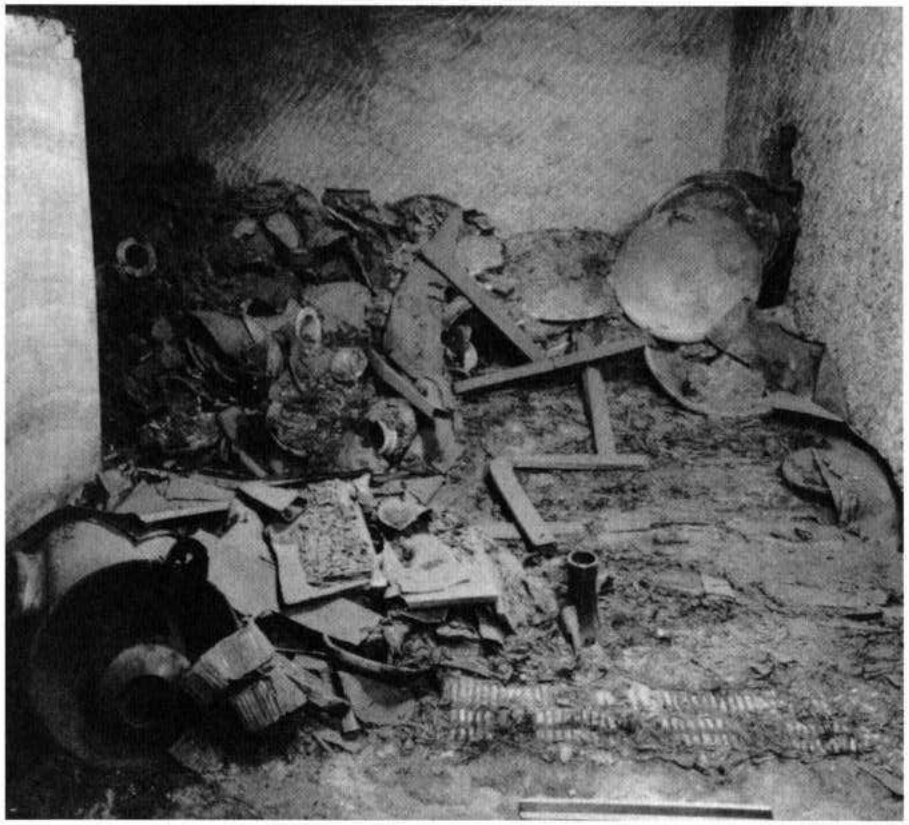
a

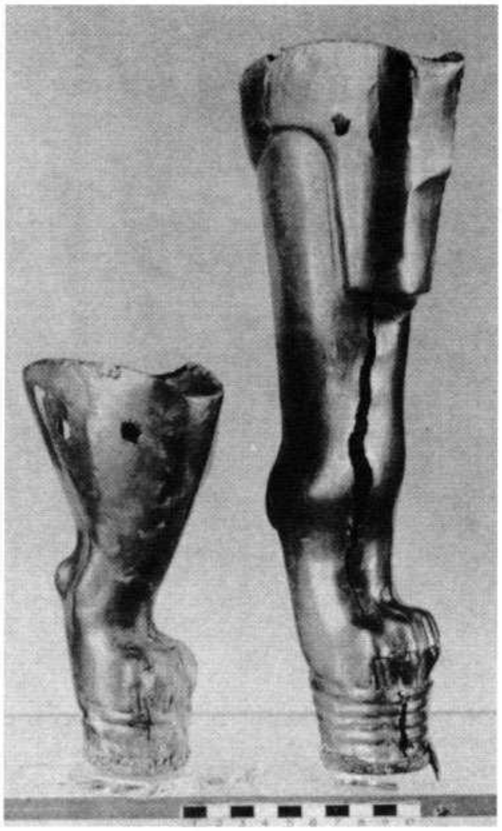


b

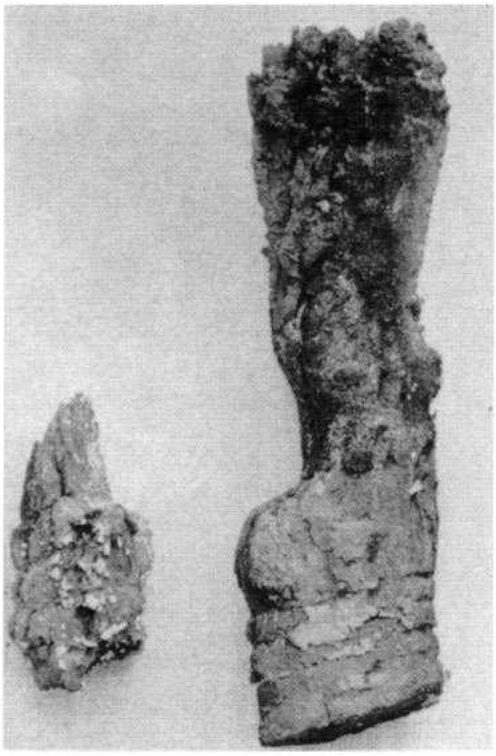

a


b

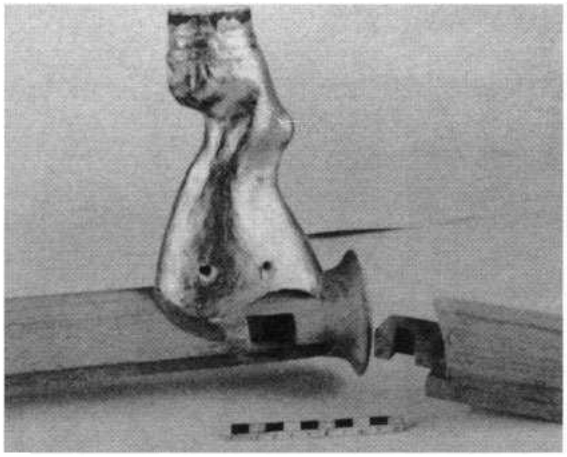

c



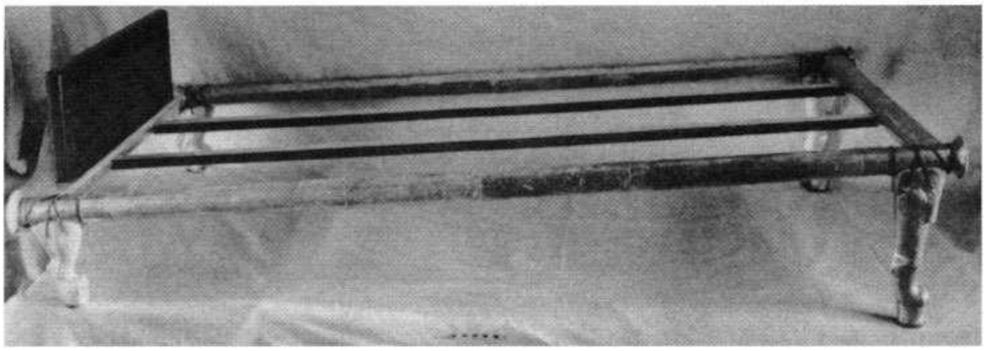
a



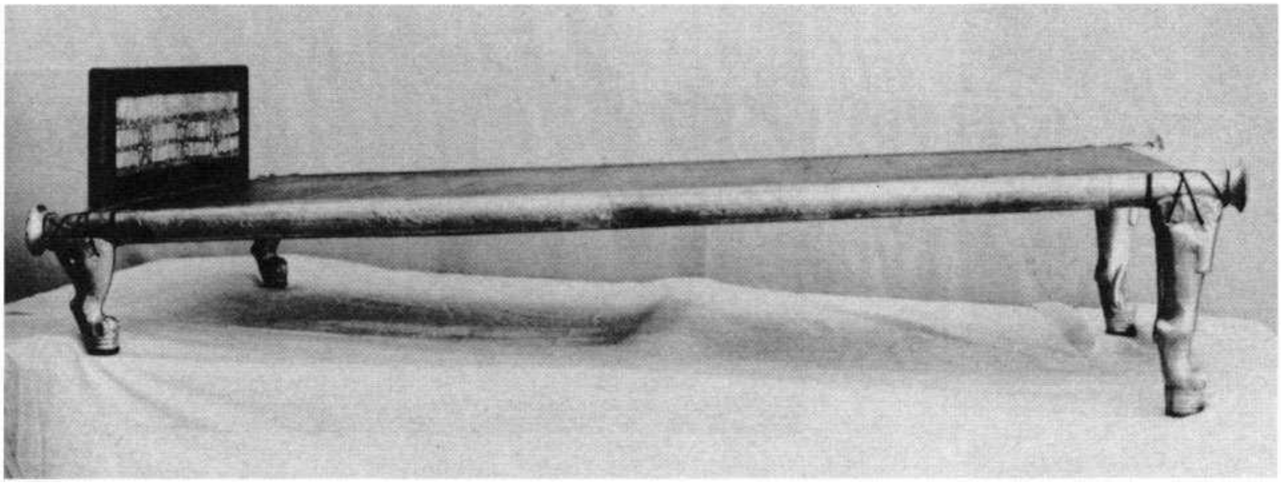
b



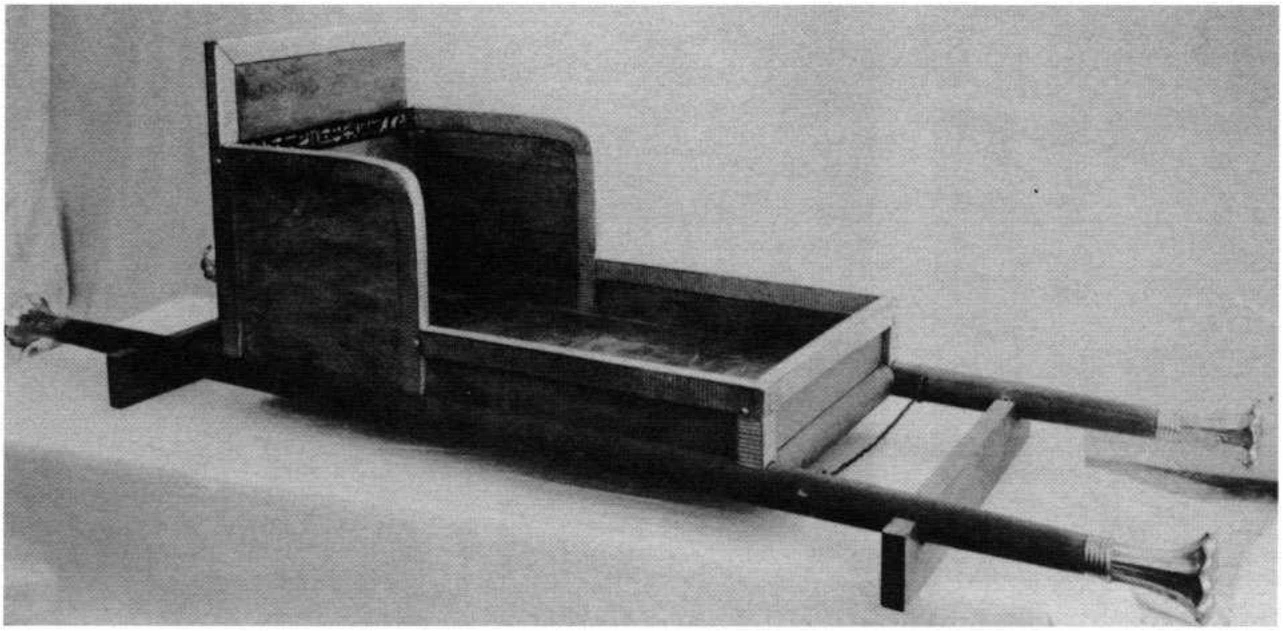
c



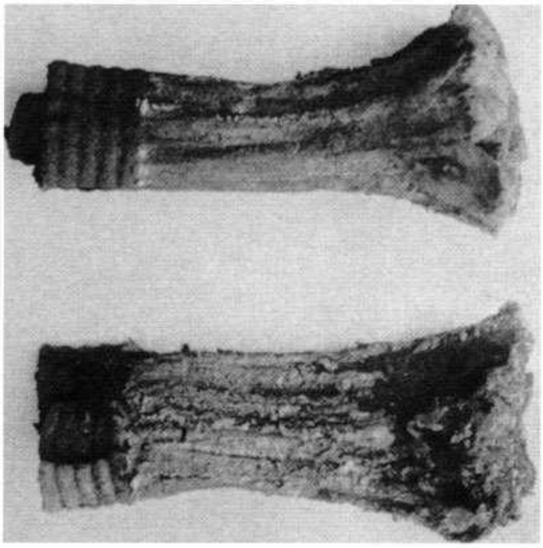
d



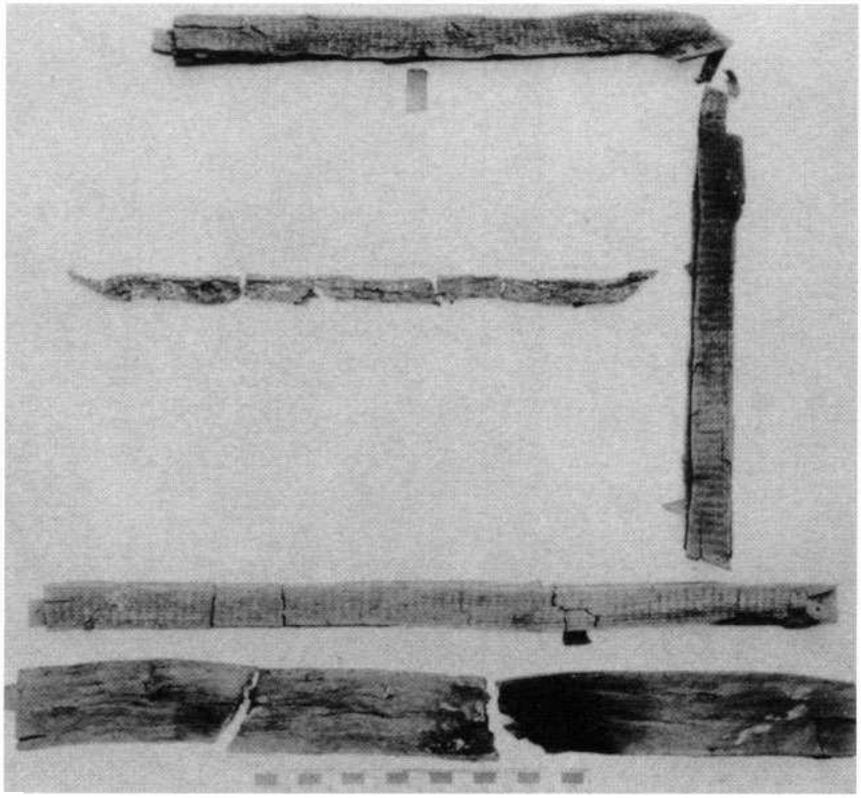
e



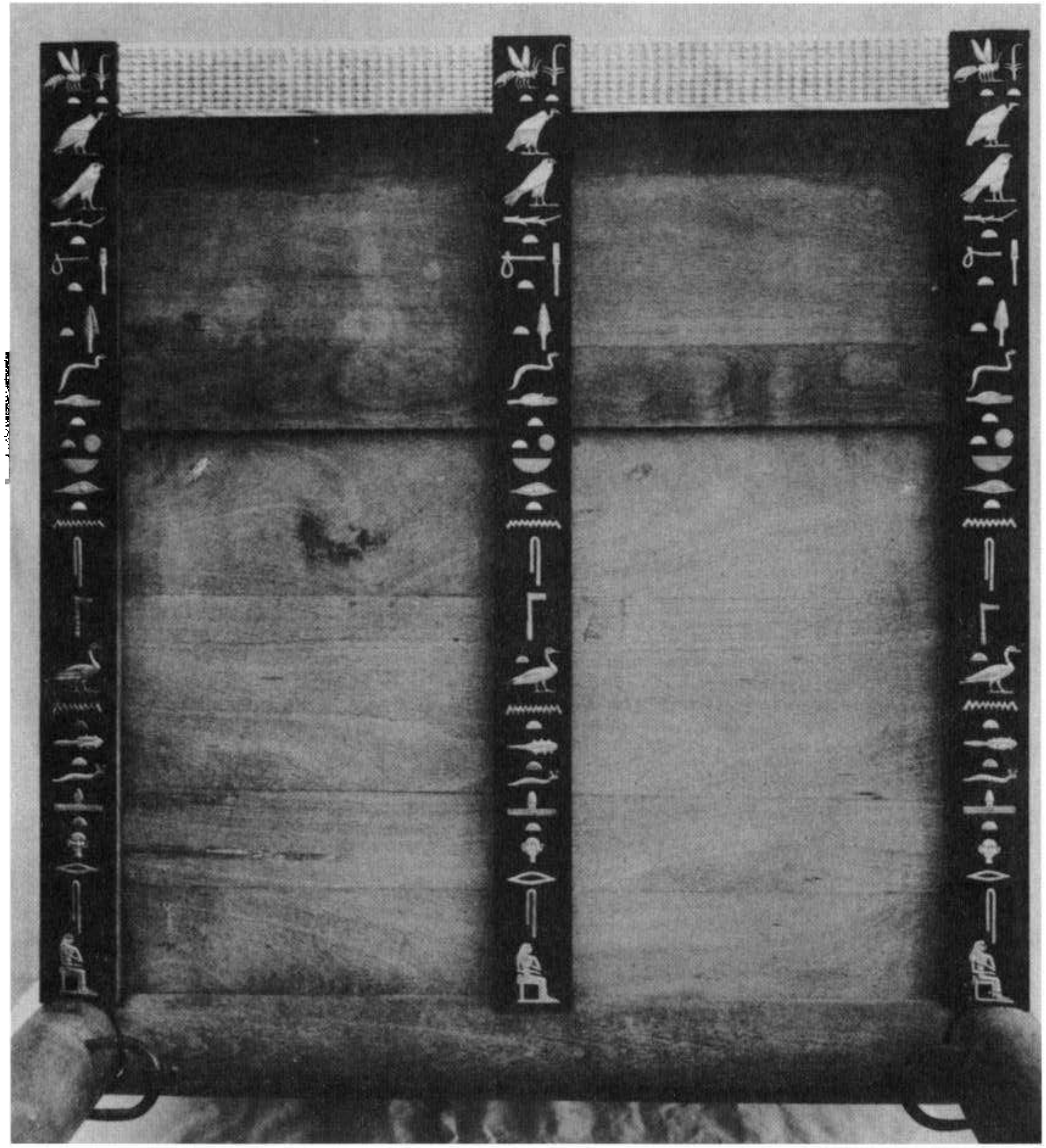
a

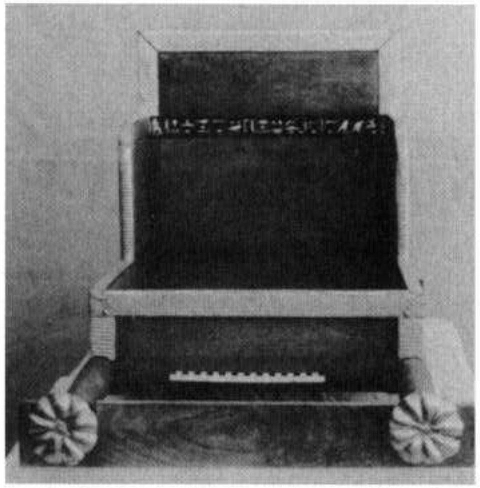


b

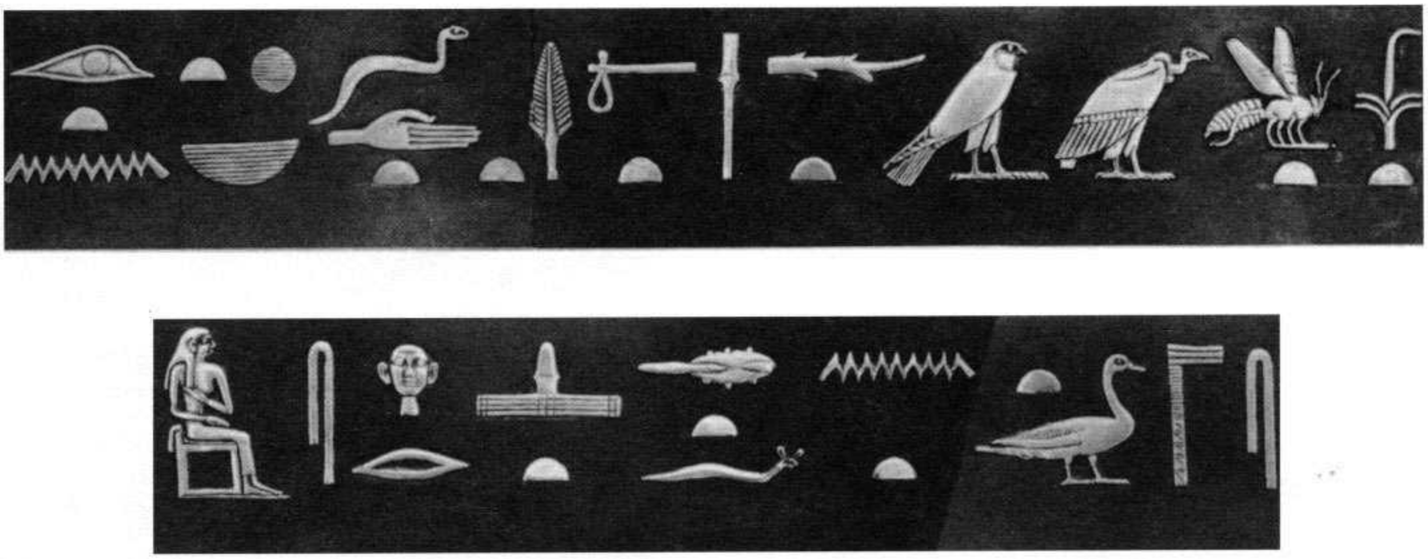


c

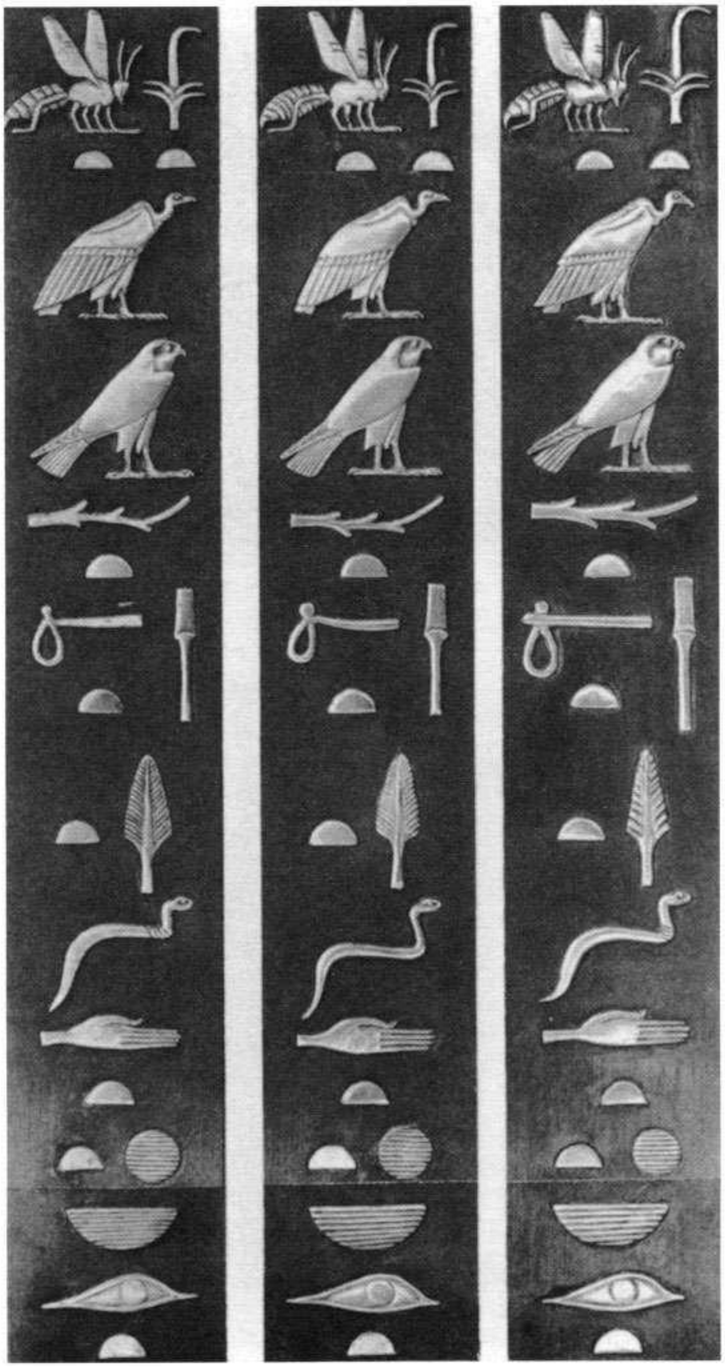




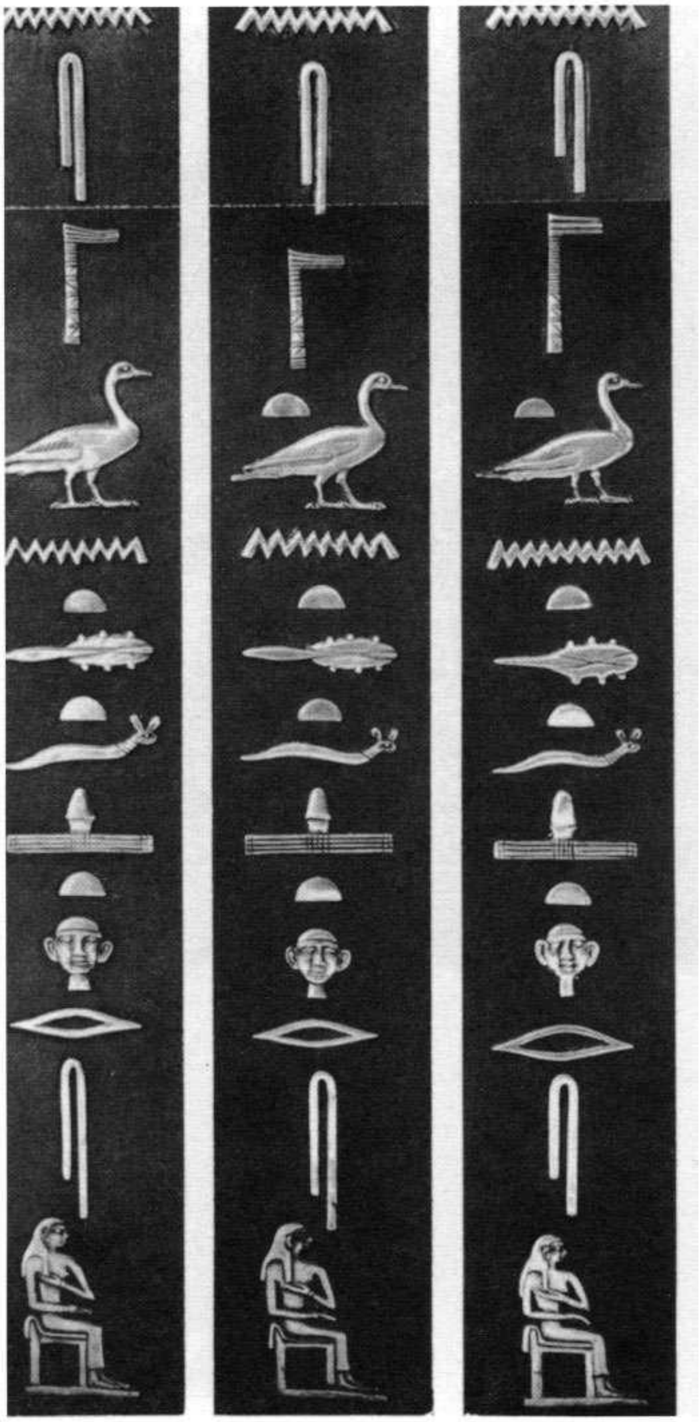
b



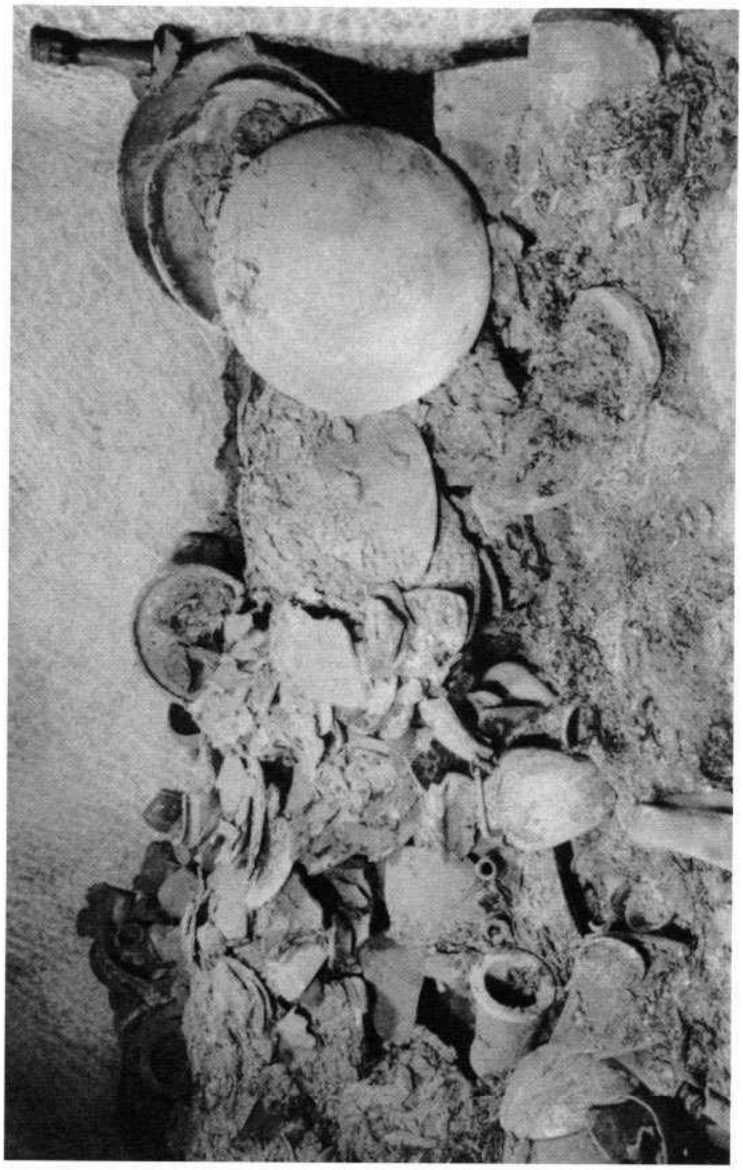
a



b

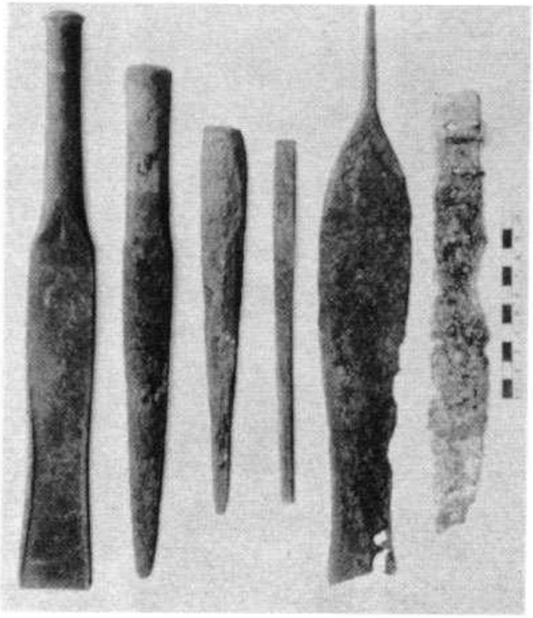


c

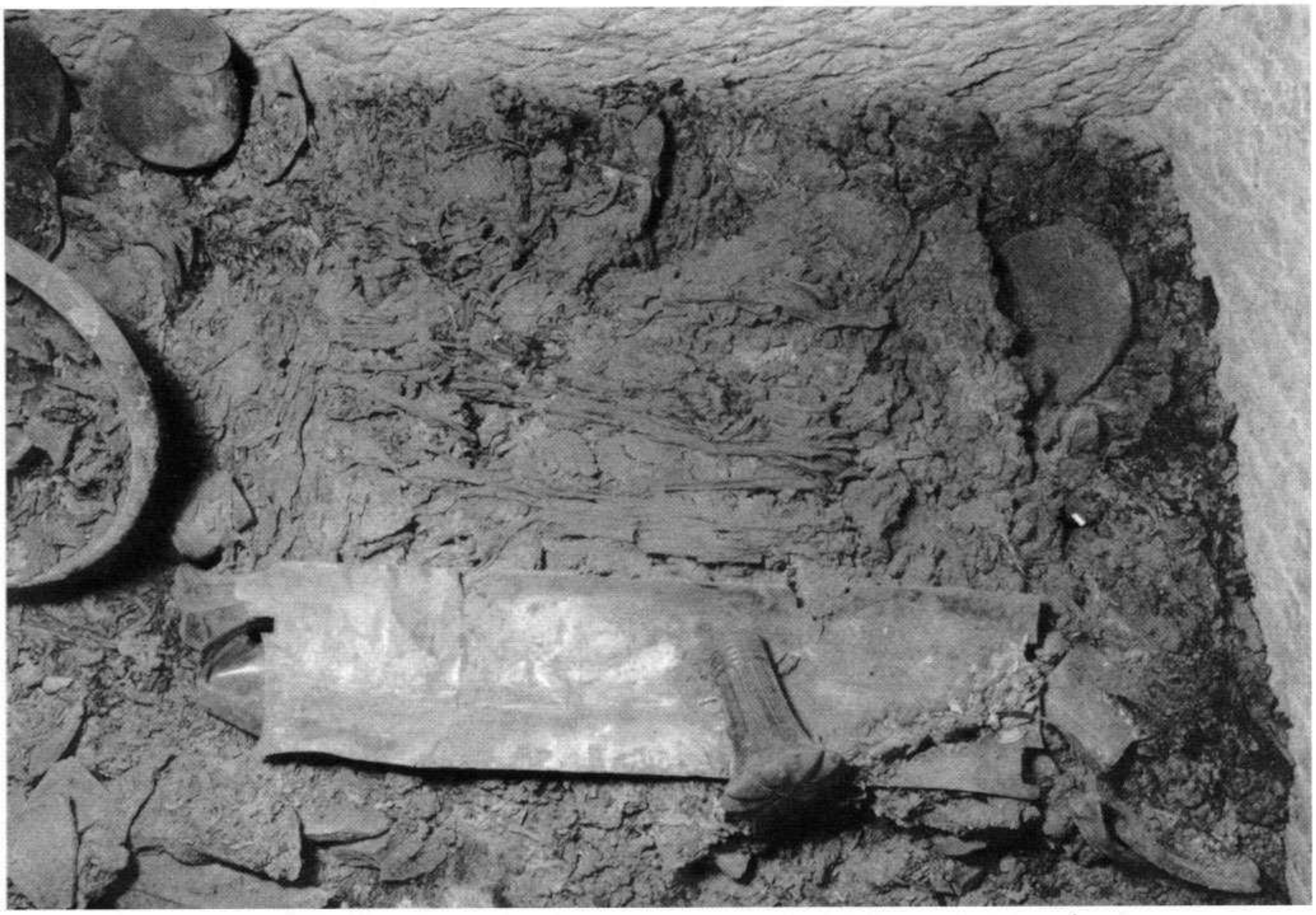


a

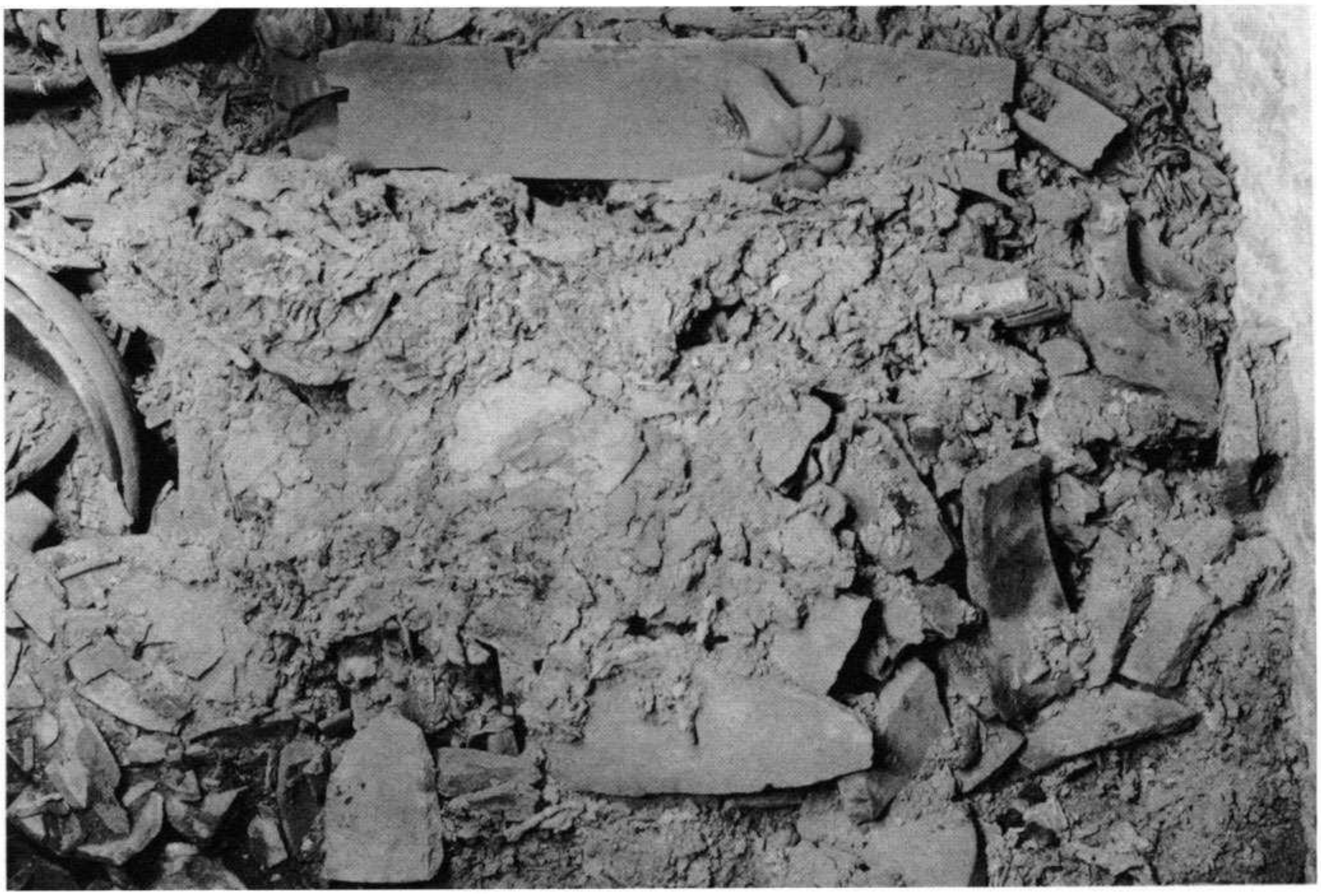
c



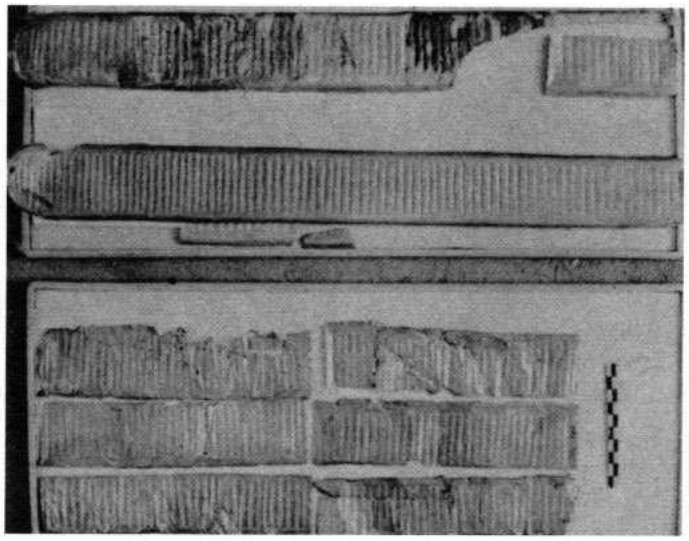
b



a

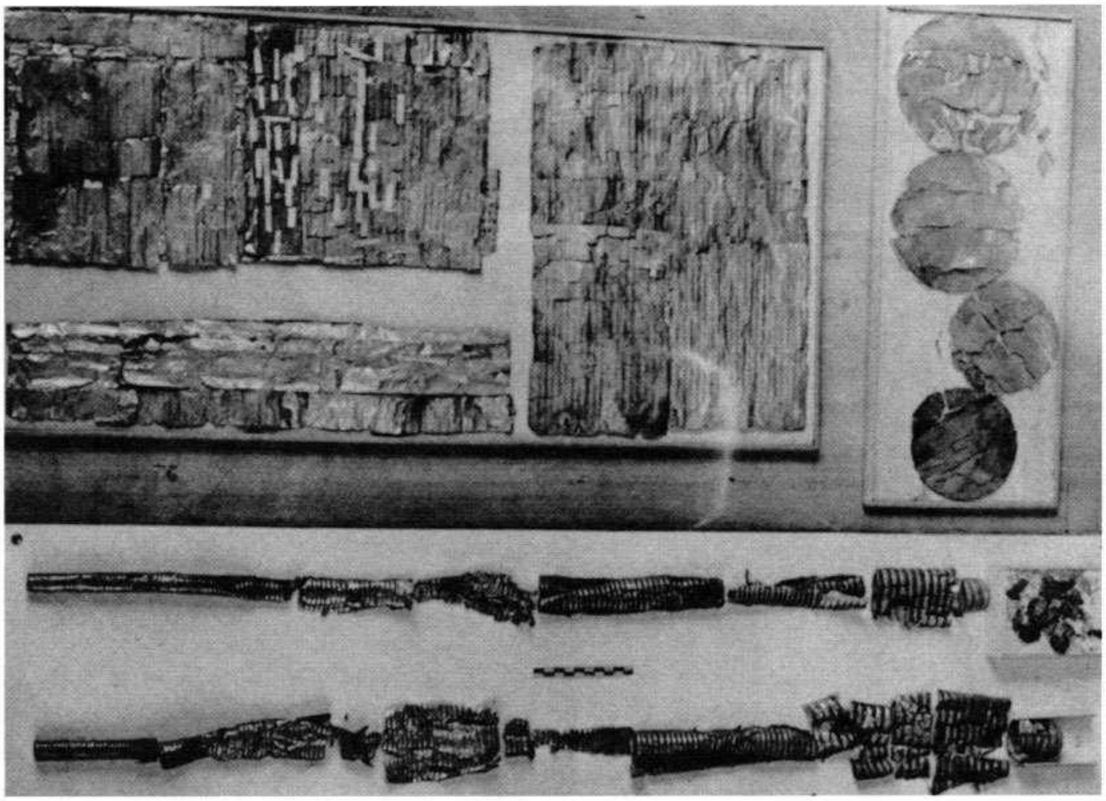


b



a

b

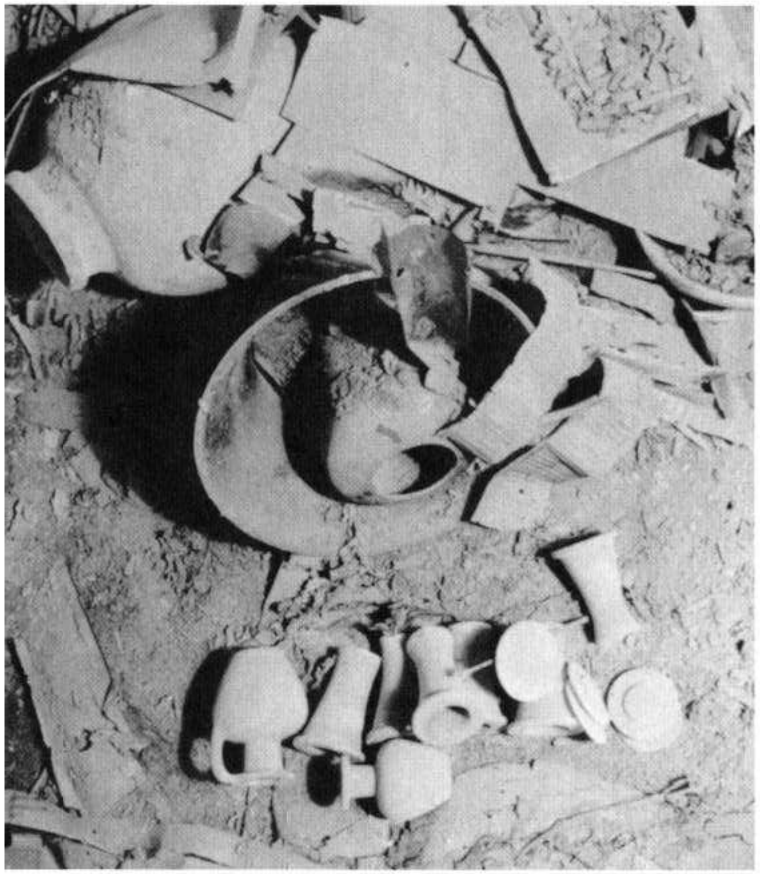


a

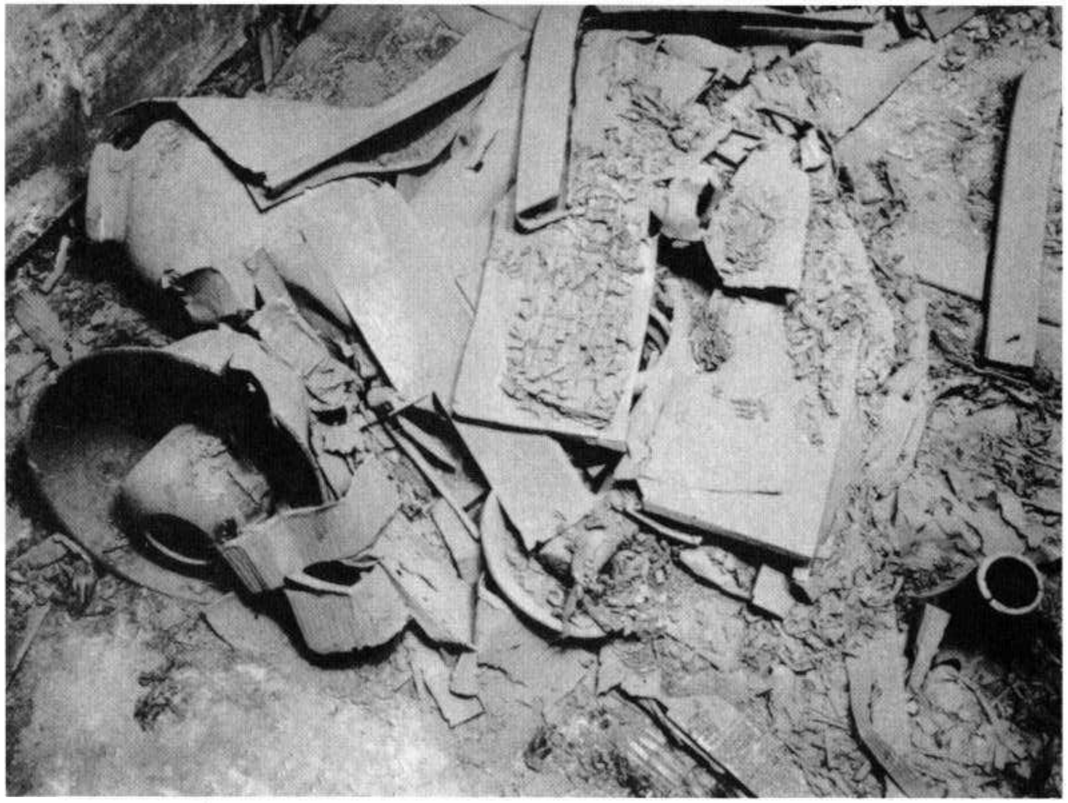
b

a

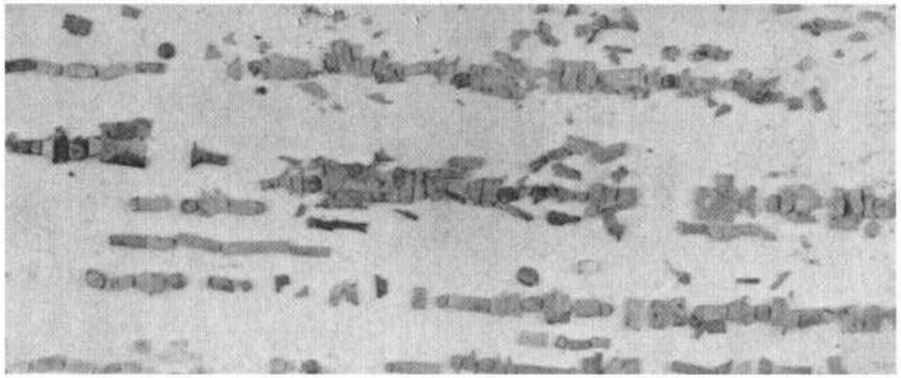
b



c



d

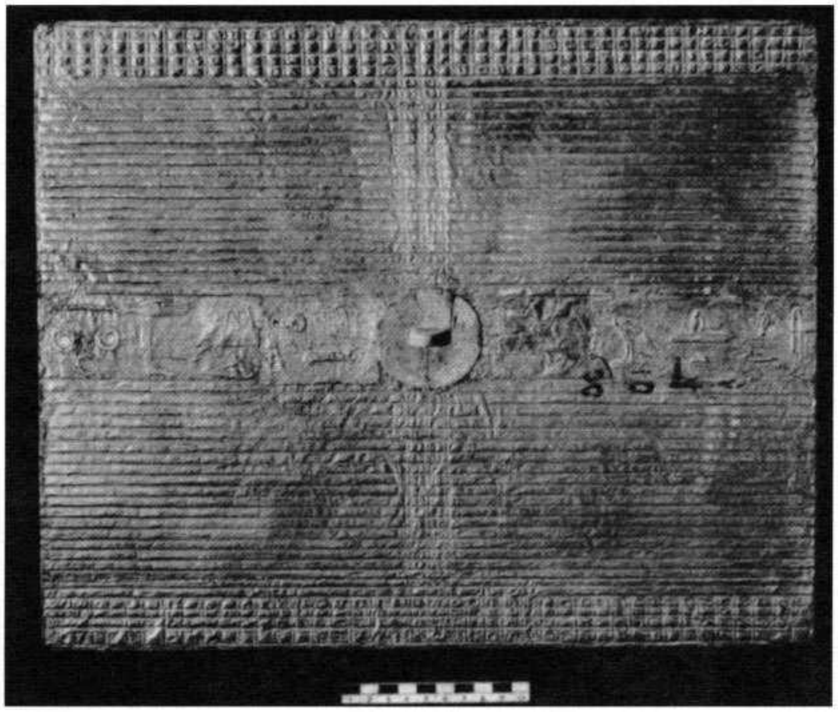


d

a

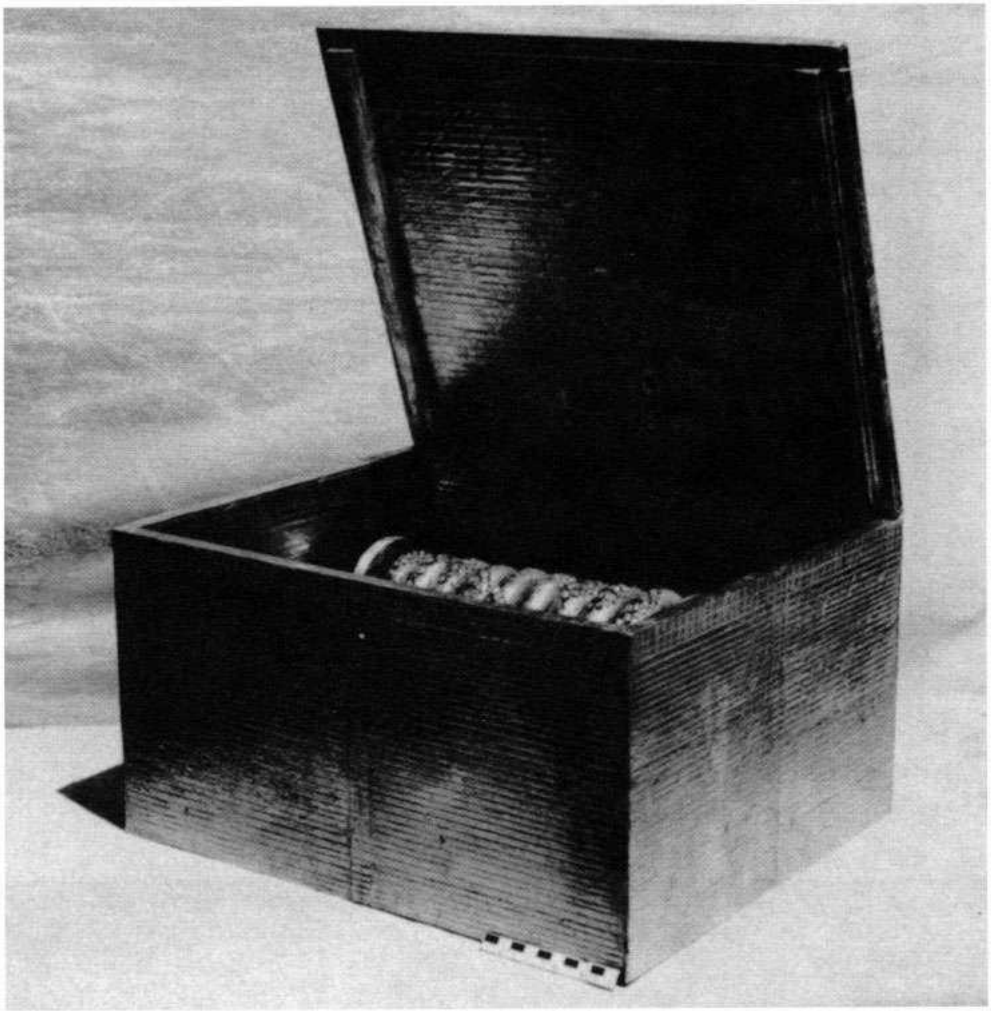
c

b

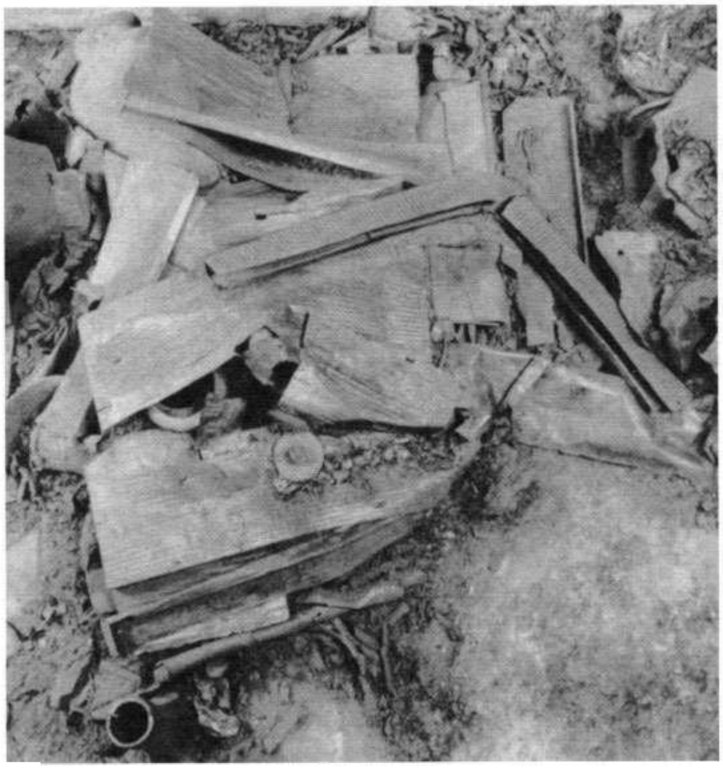


a

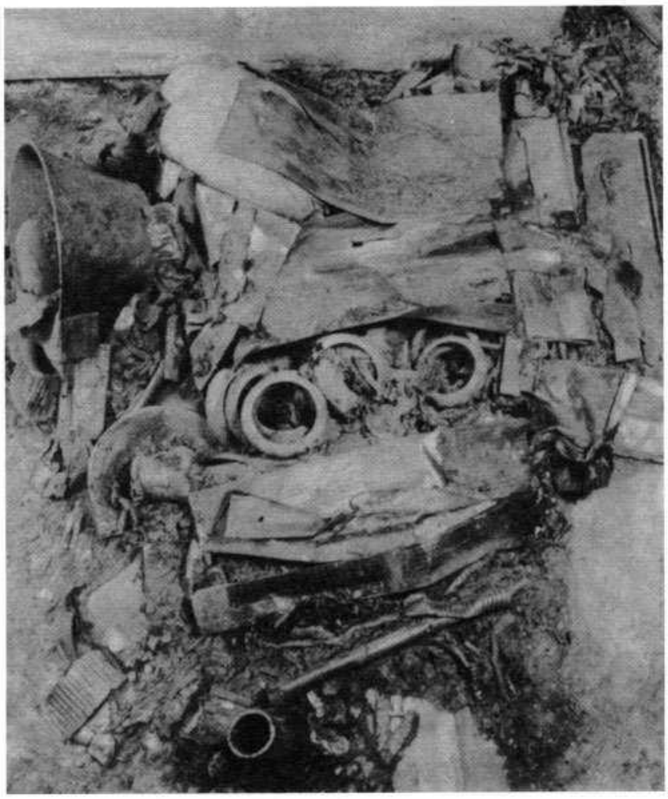
b



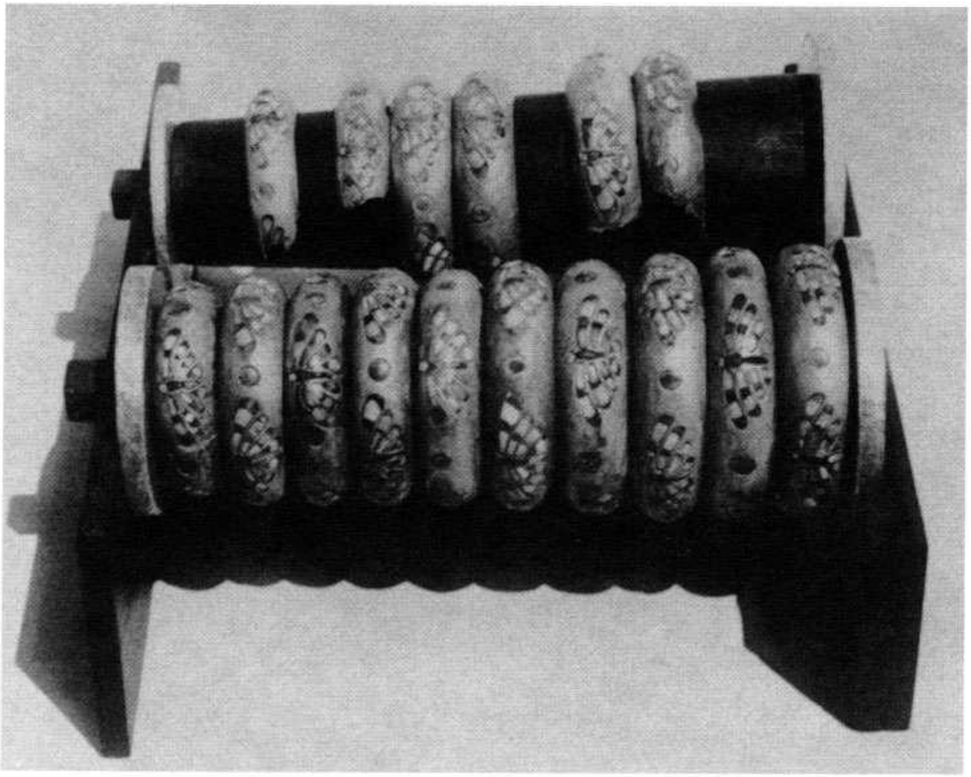
a



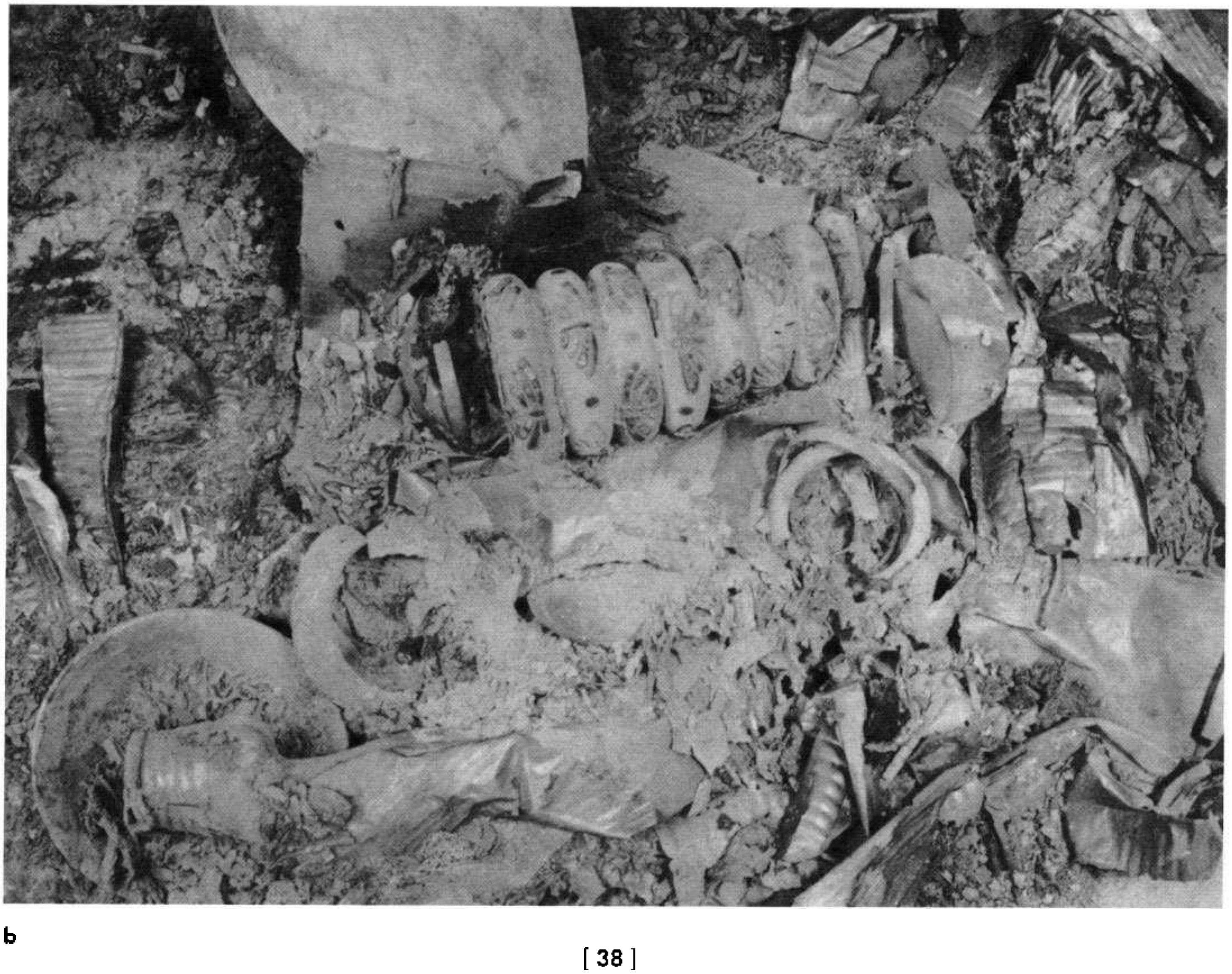
b



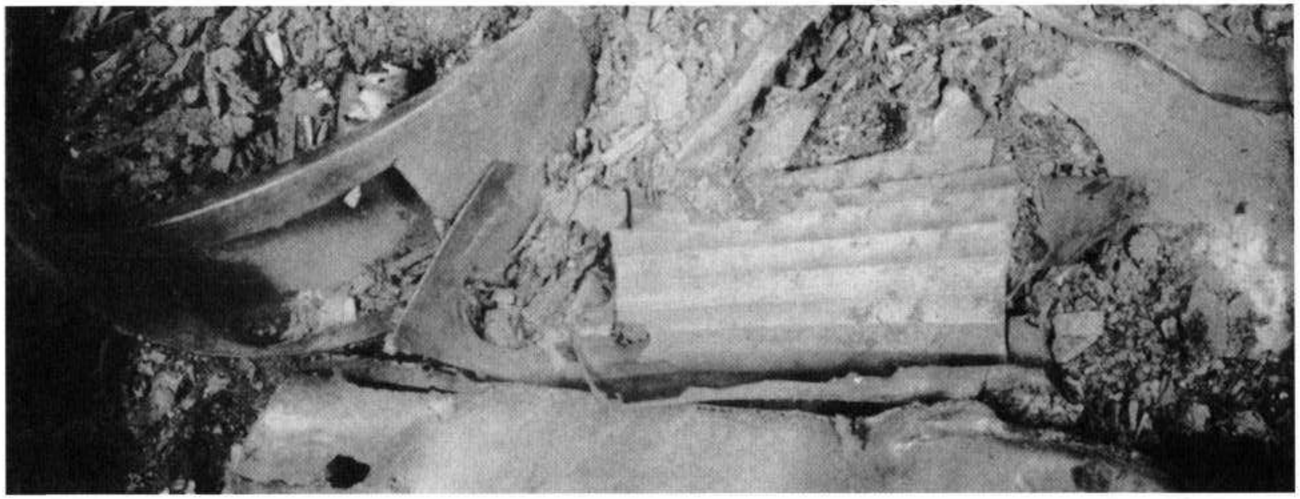
c



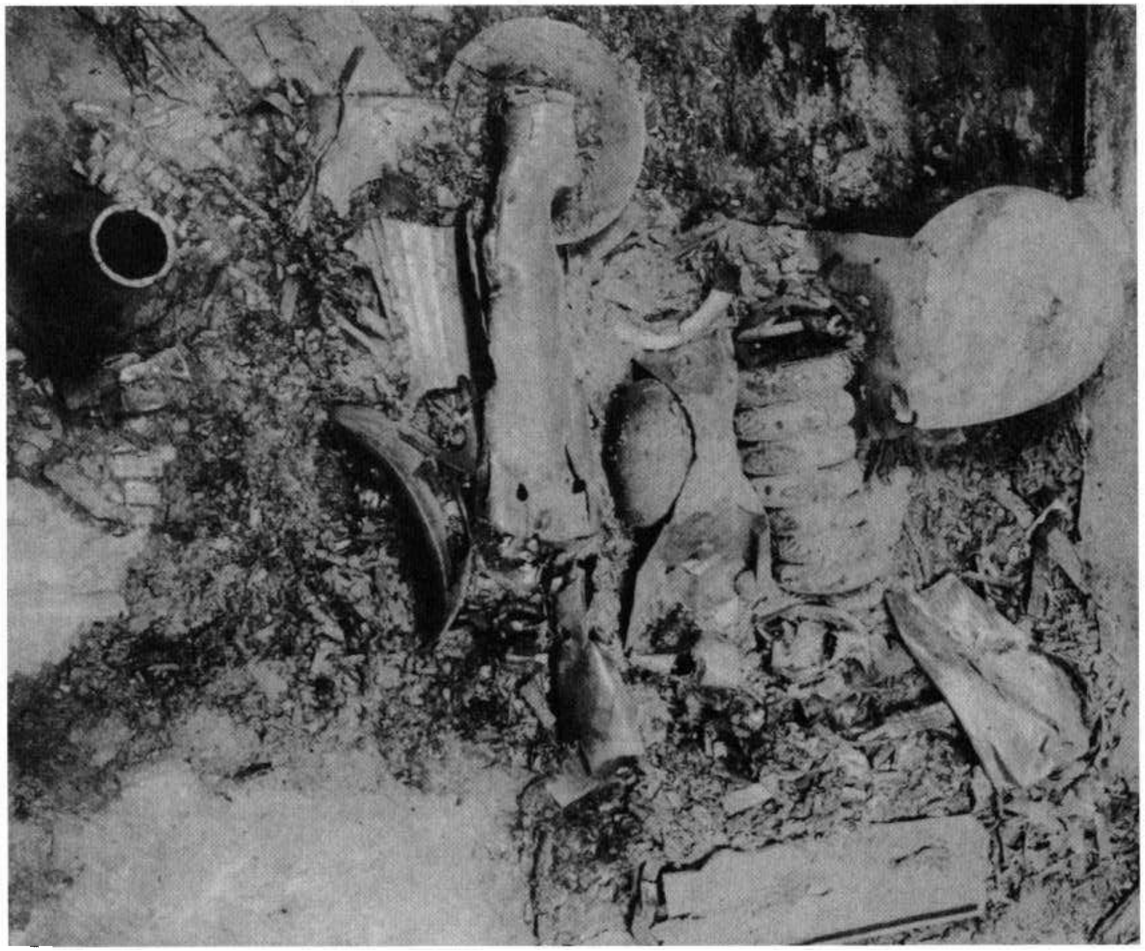
a



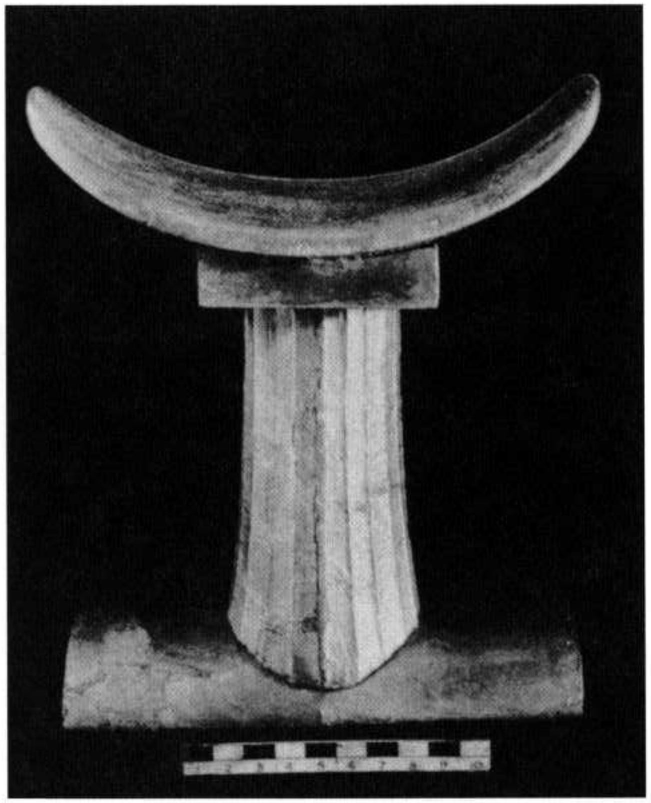
b



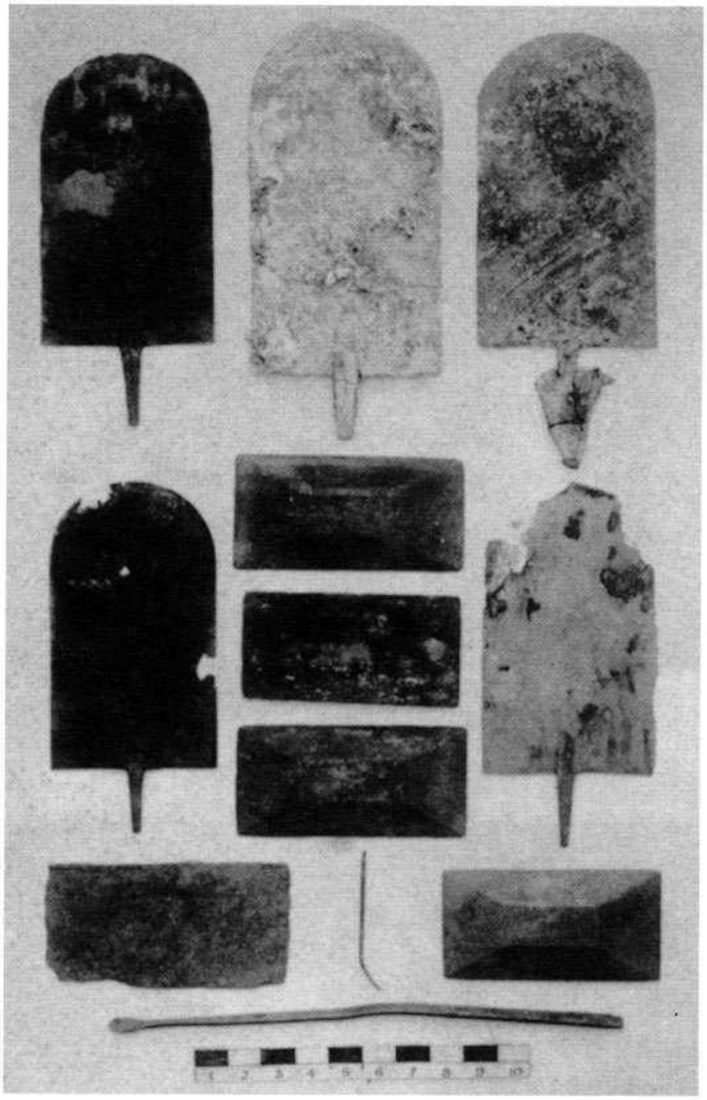
b



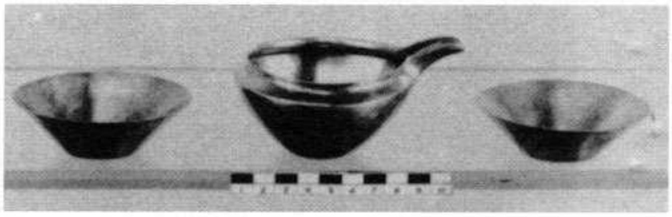
c



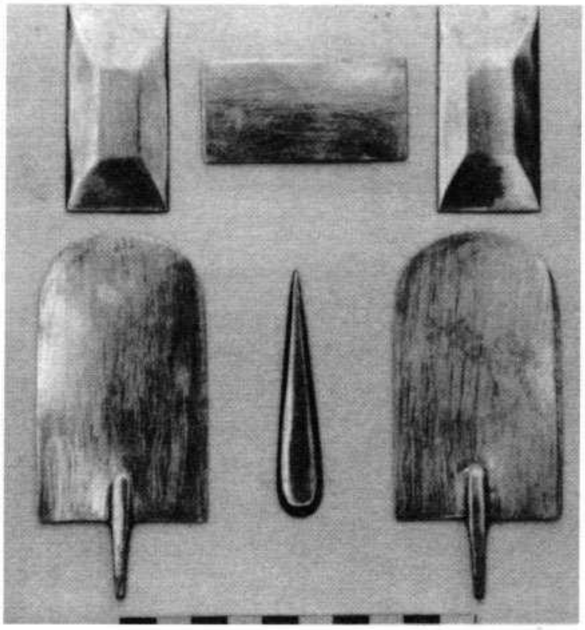
a


1 2 3 4 5 6 7 8 9 10

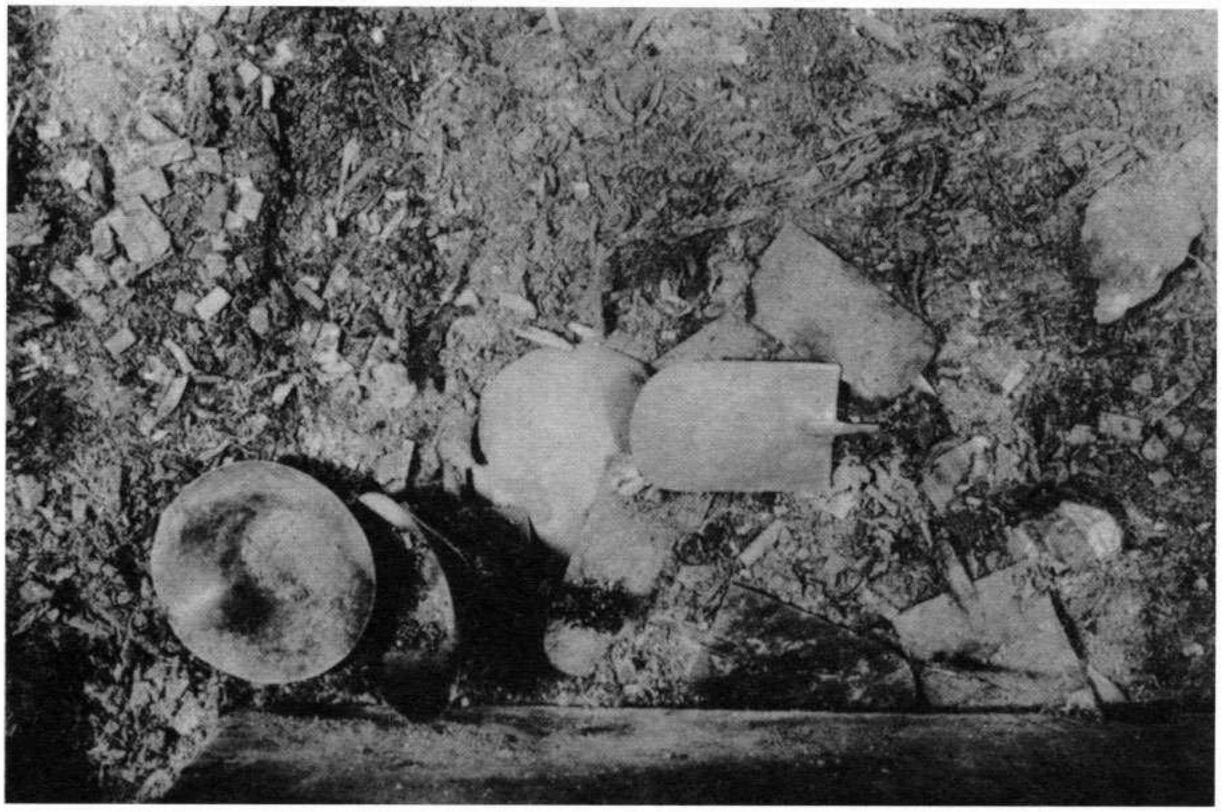
a


1 2 3 4 5 6 7 8 9 10

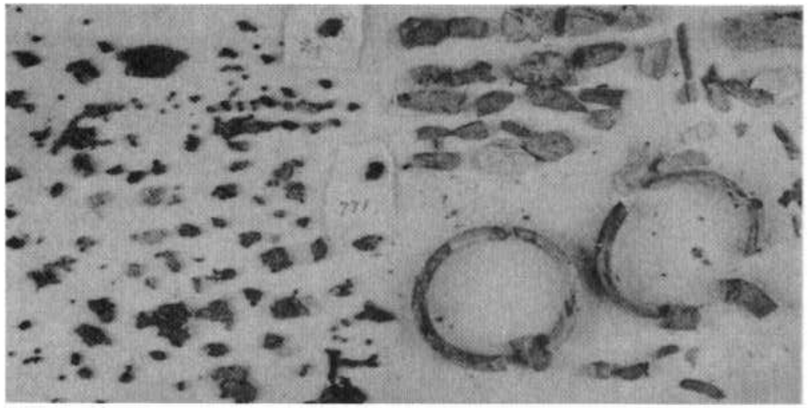
b



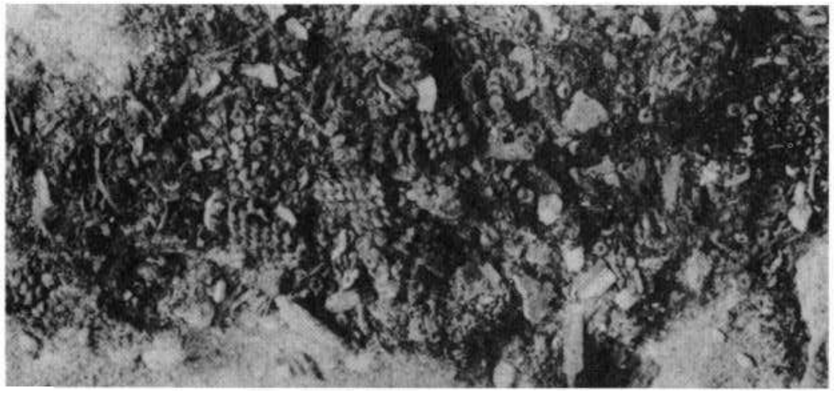
c



d

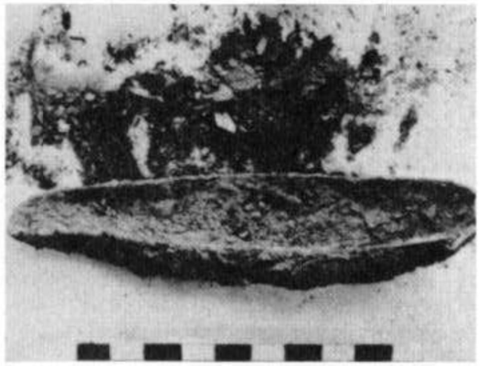


a

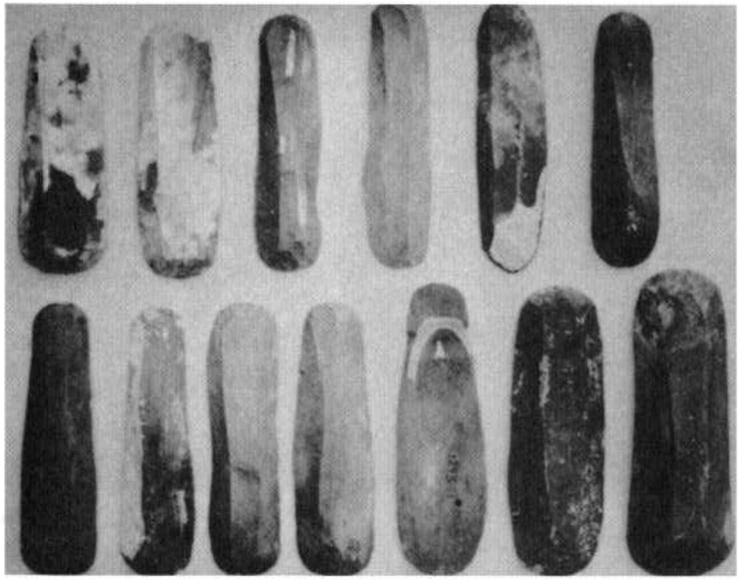


b

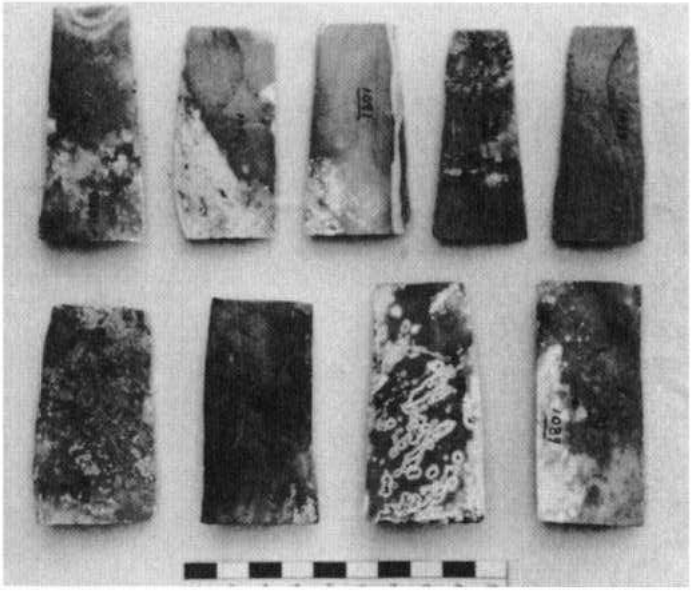
c



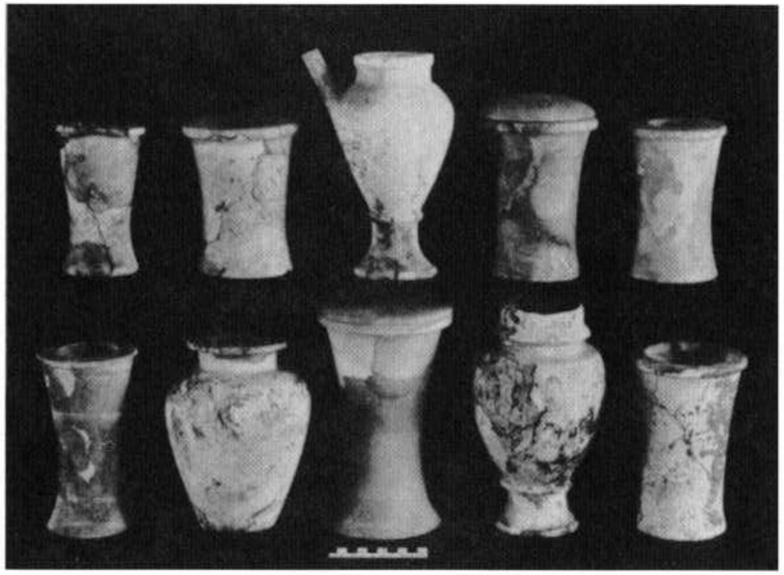
d



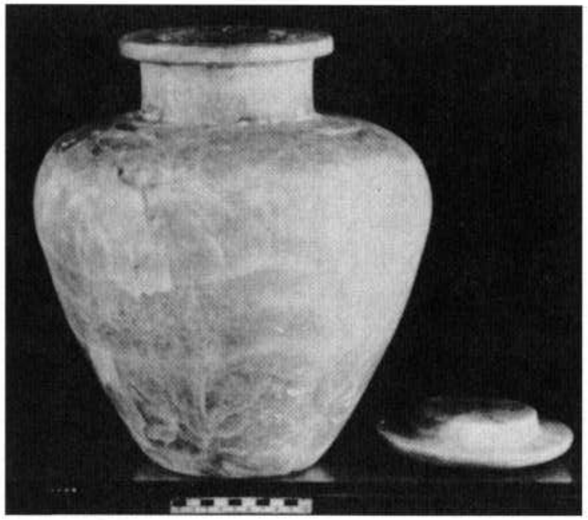
e



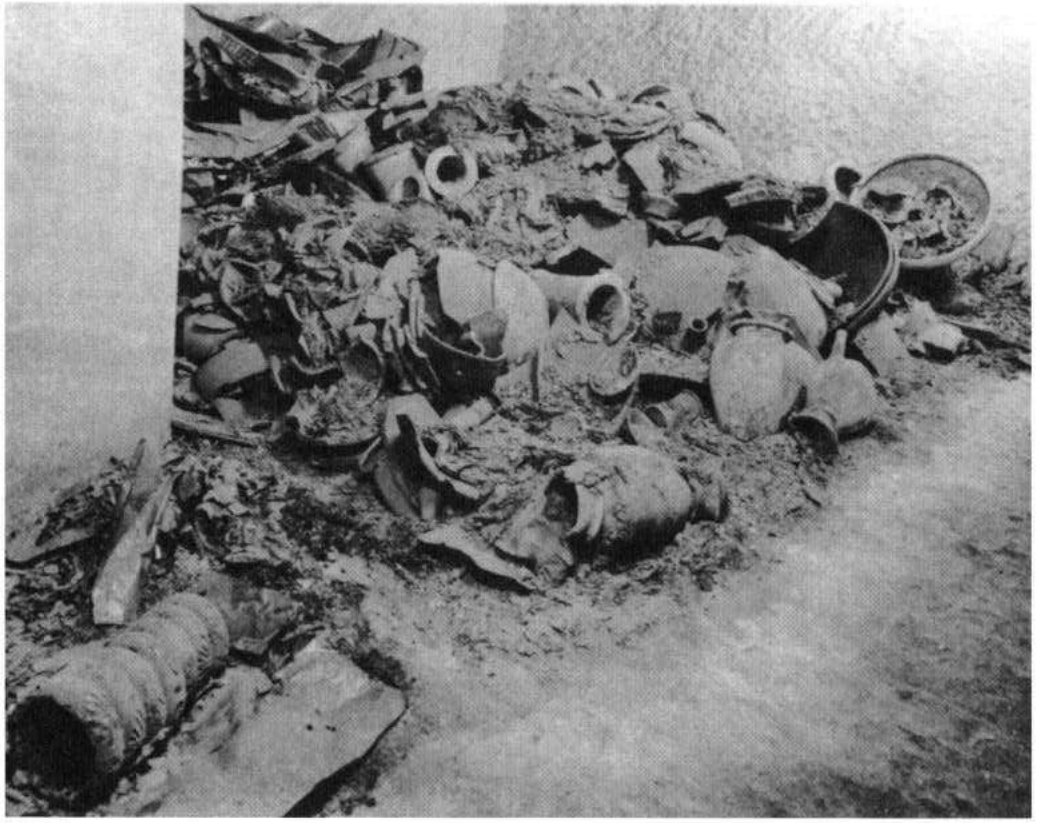
f



a

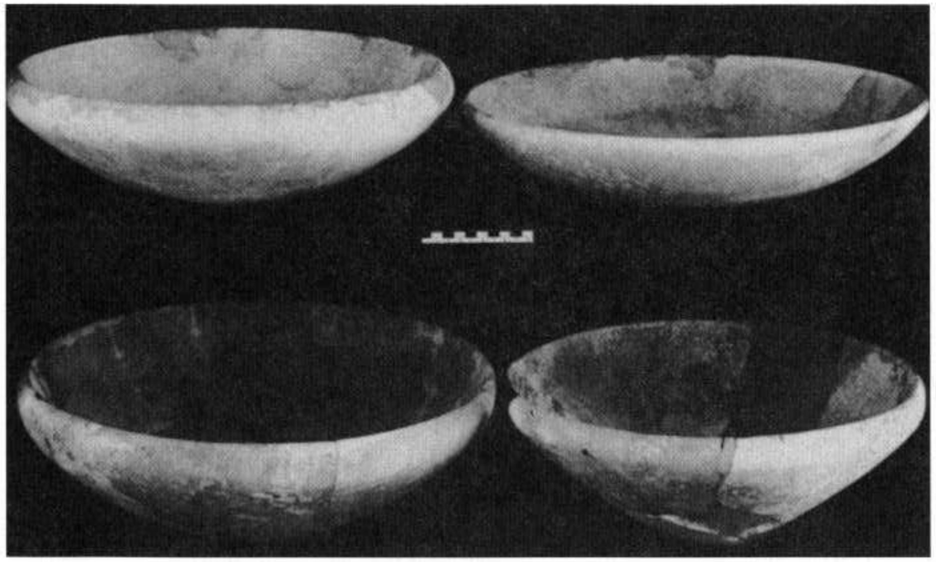


b

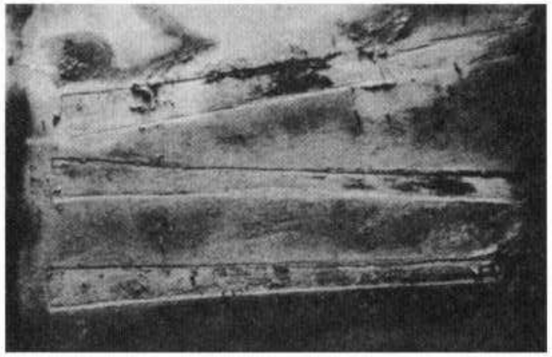


c

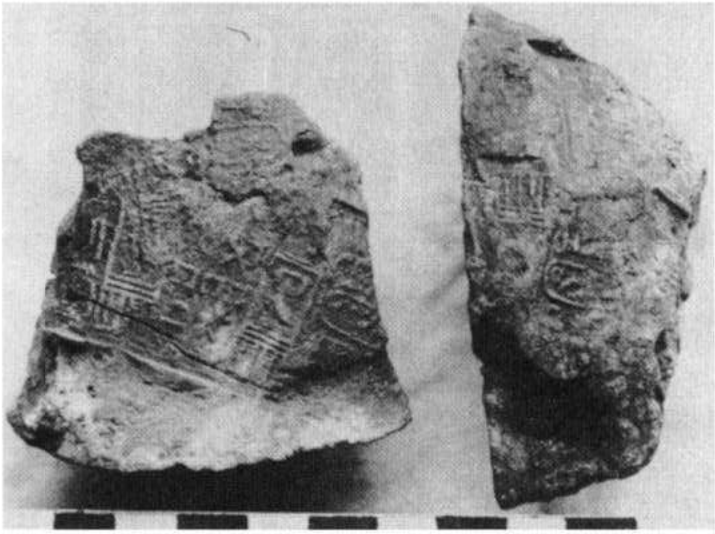
d



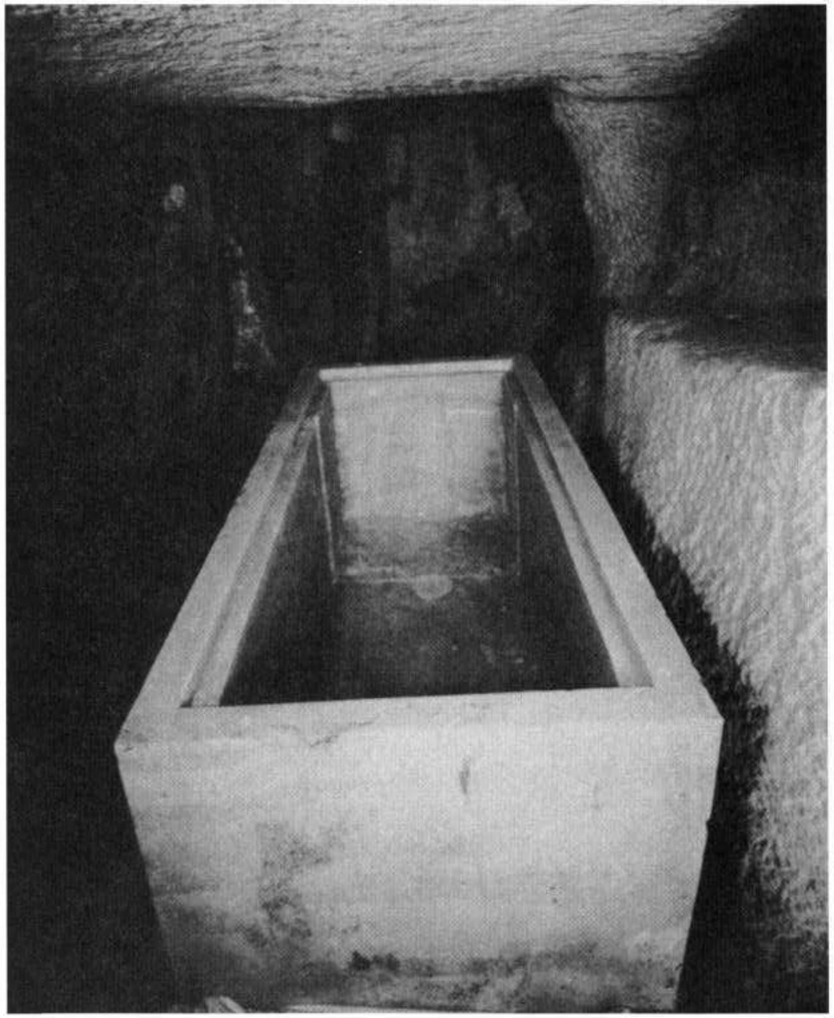
a



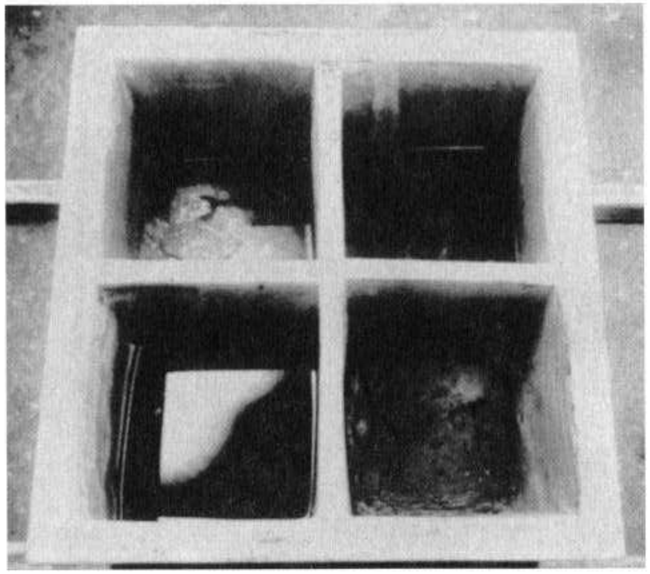
b



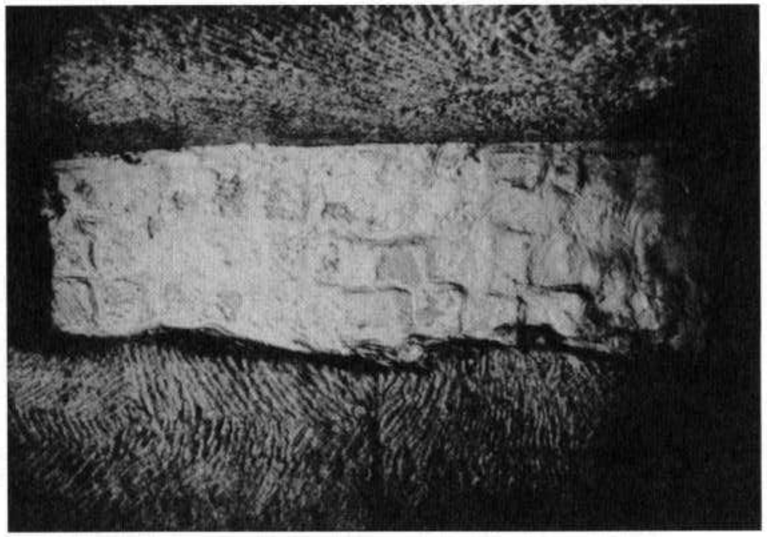
c



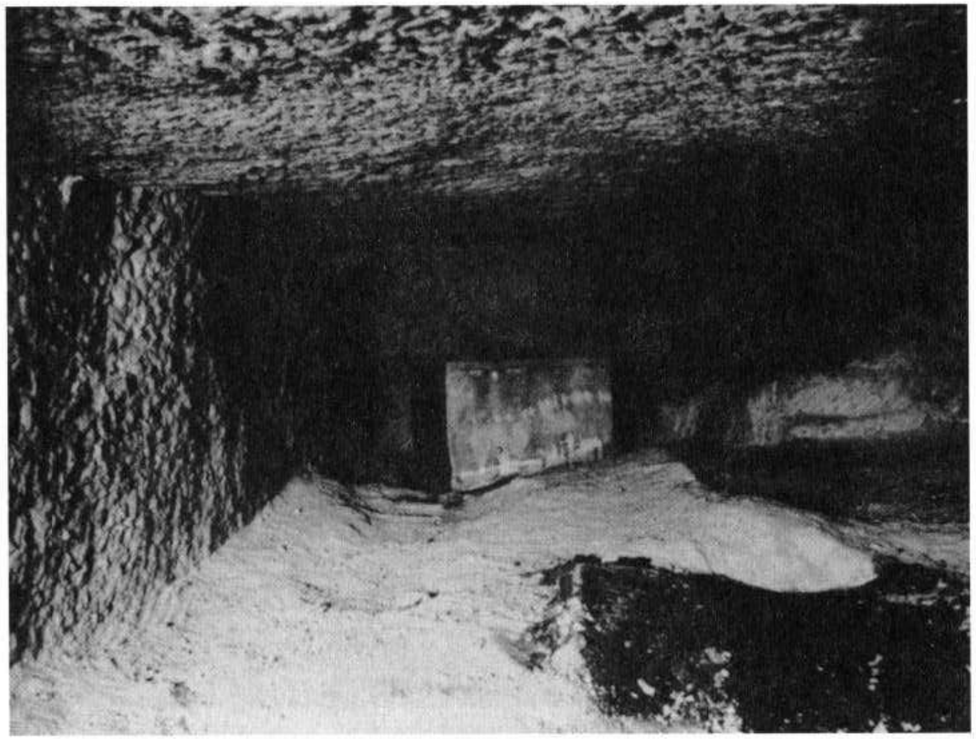
d



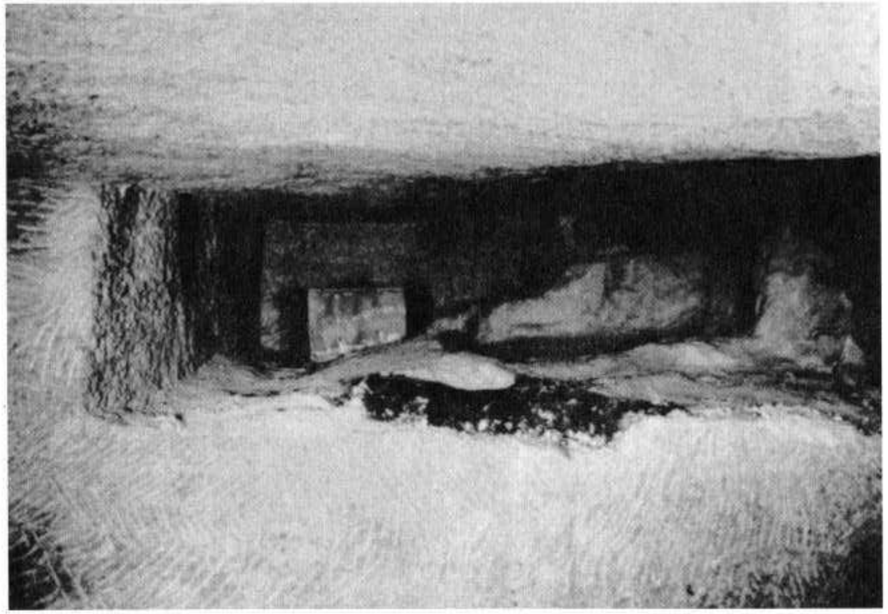
a



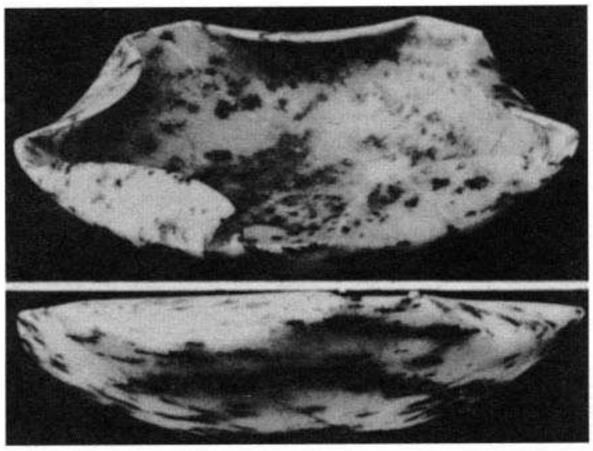
b



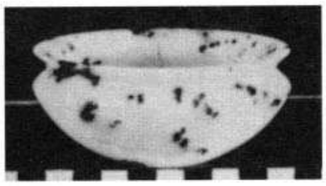
c



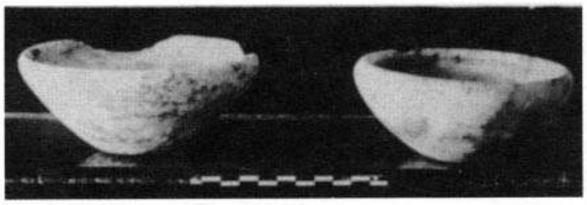
d



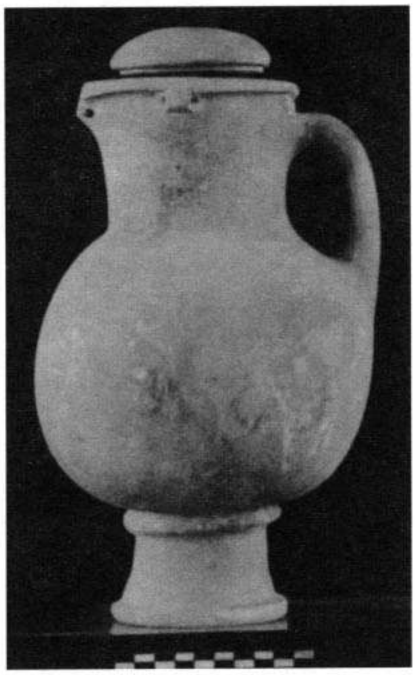
a-b



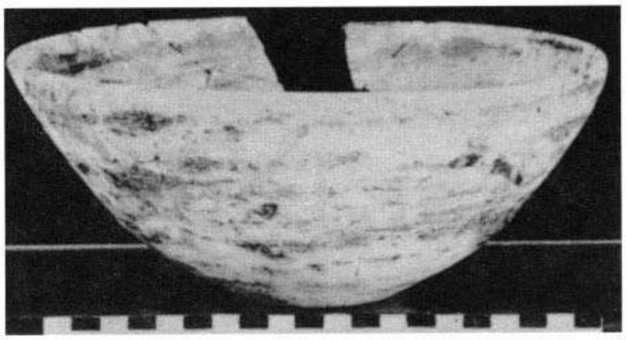
c



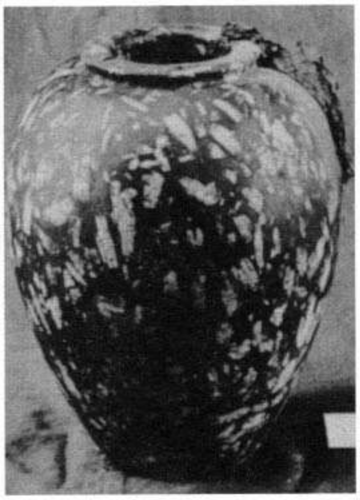
d



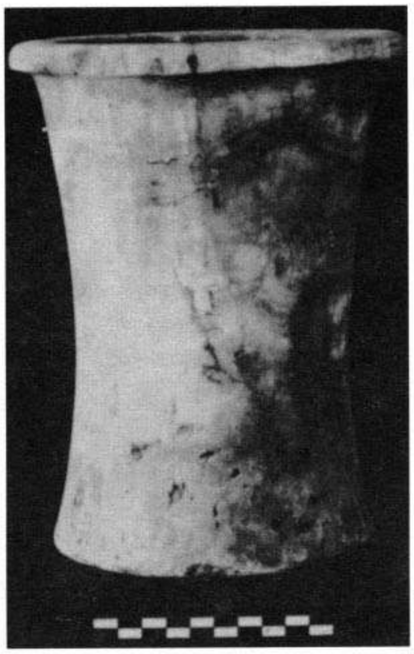
e



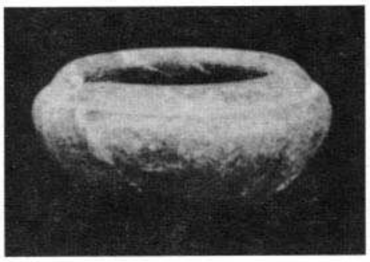
f



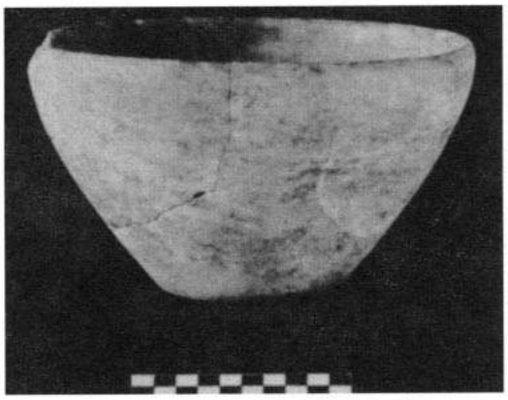
g



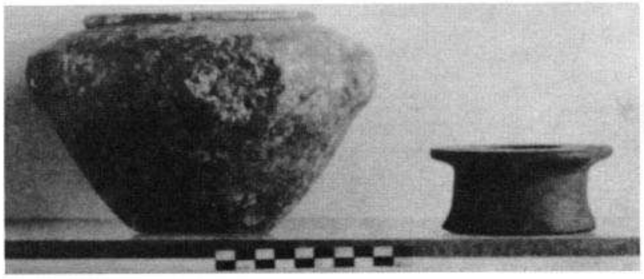
h



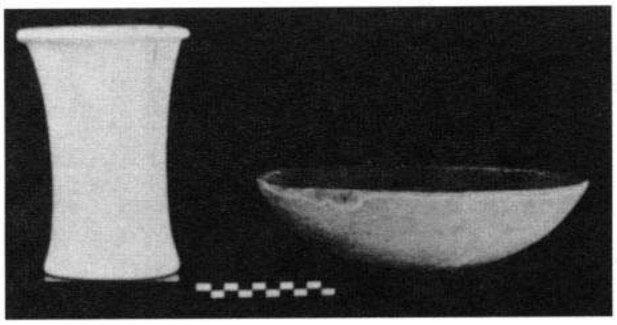
i



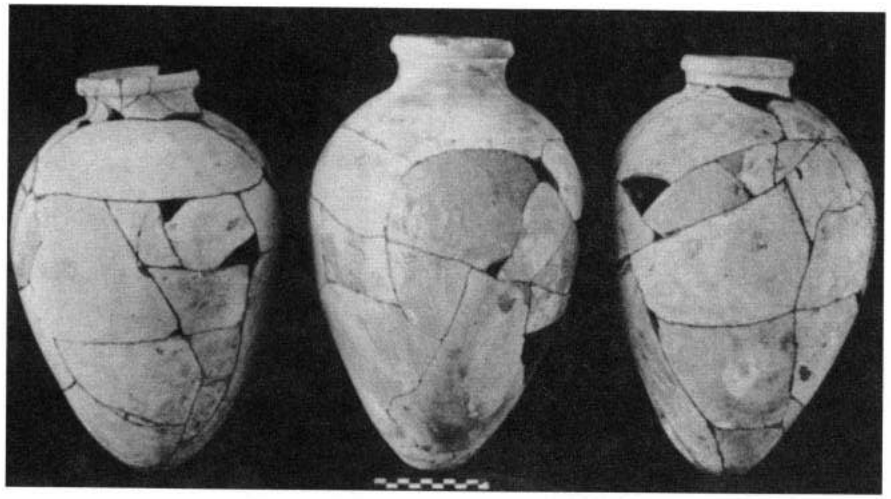
j

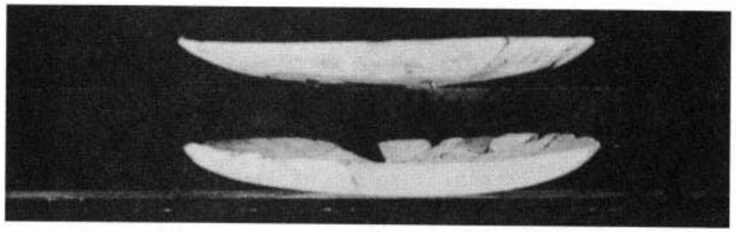


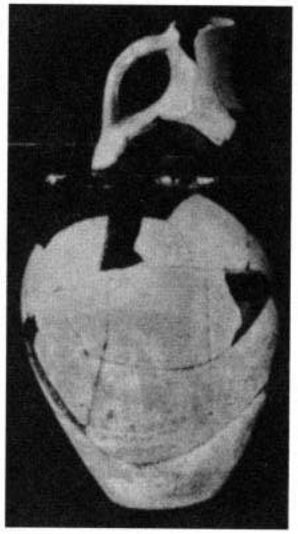
k

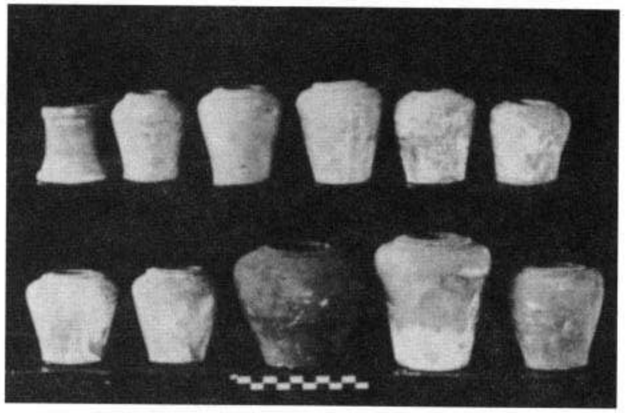


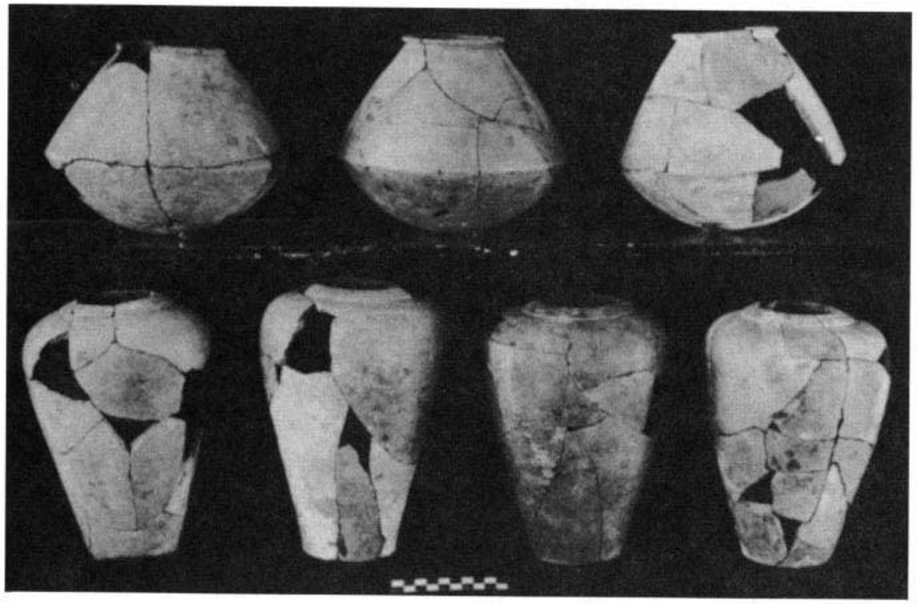
l

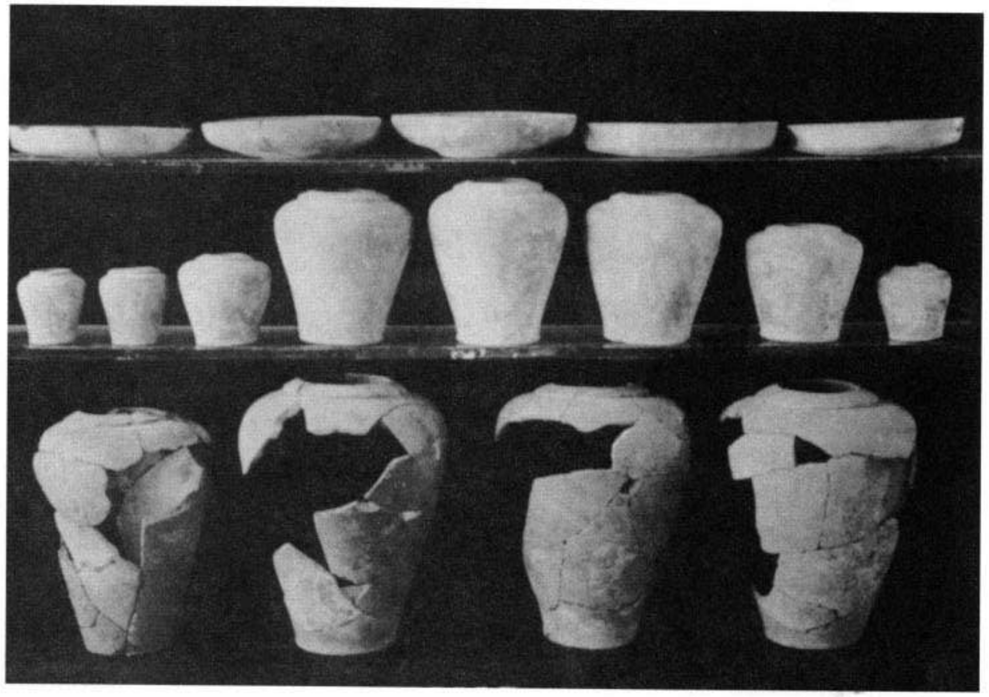

a

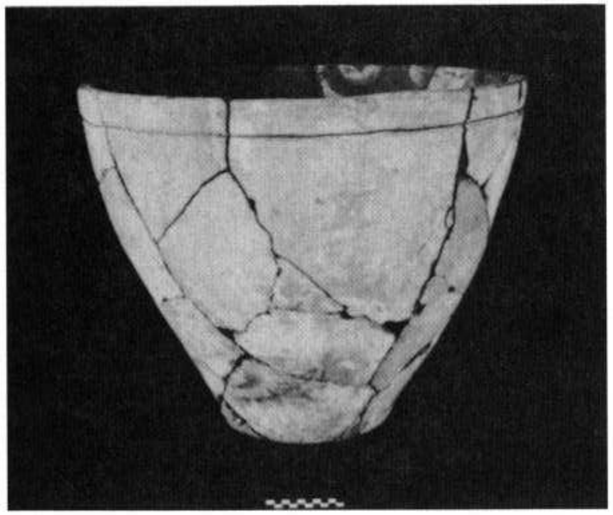

b


d

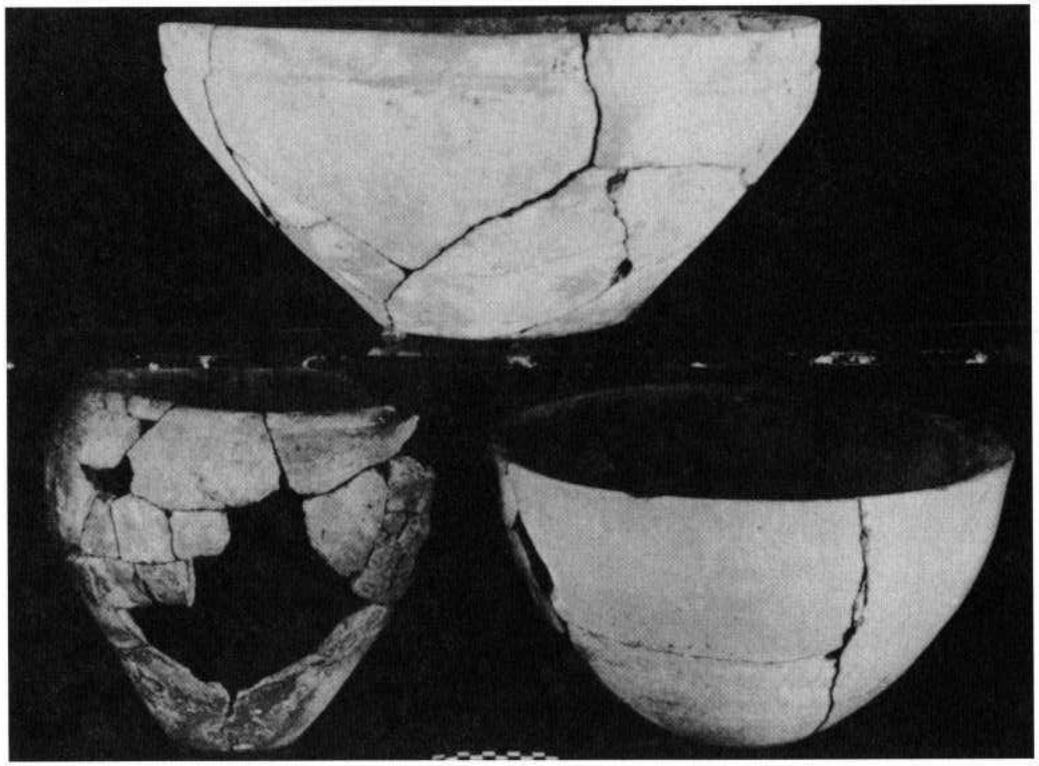

c


e

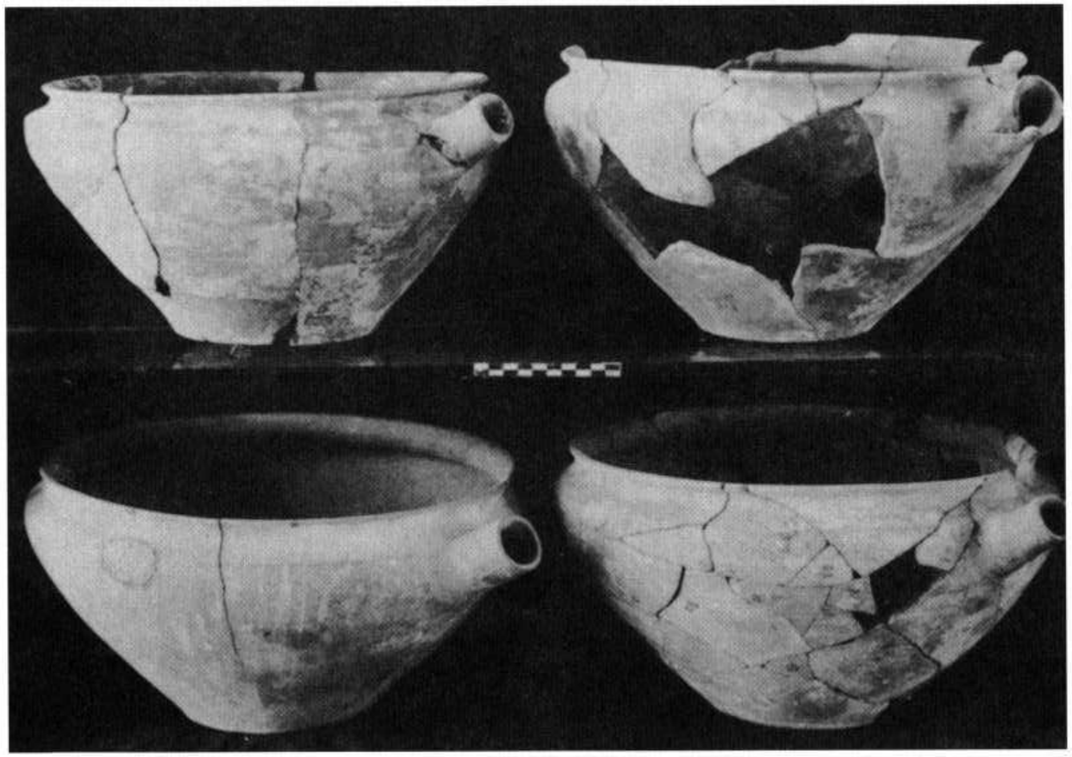

f



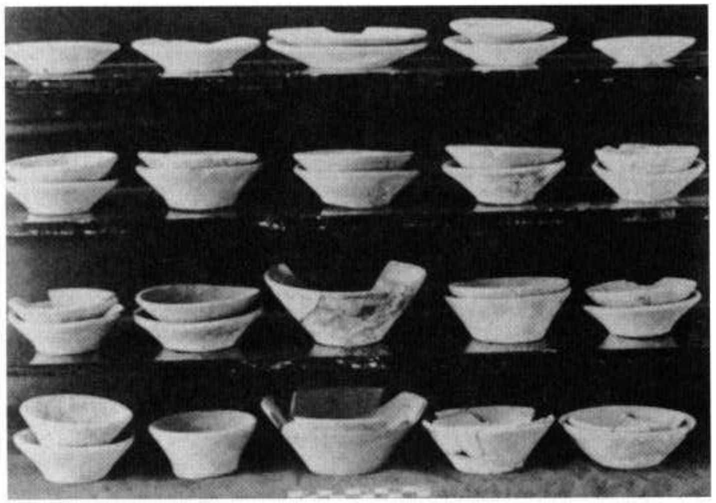
a



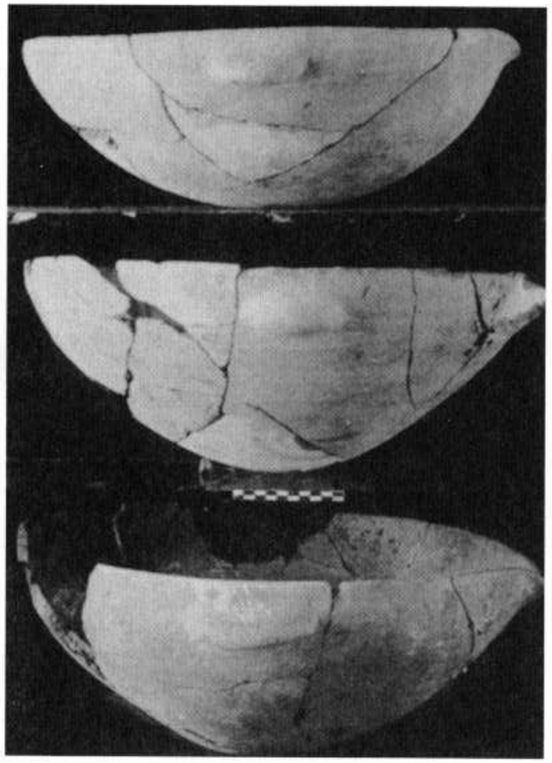
b



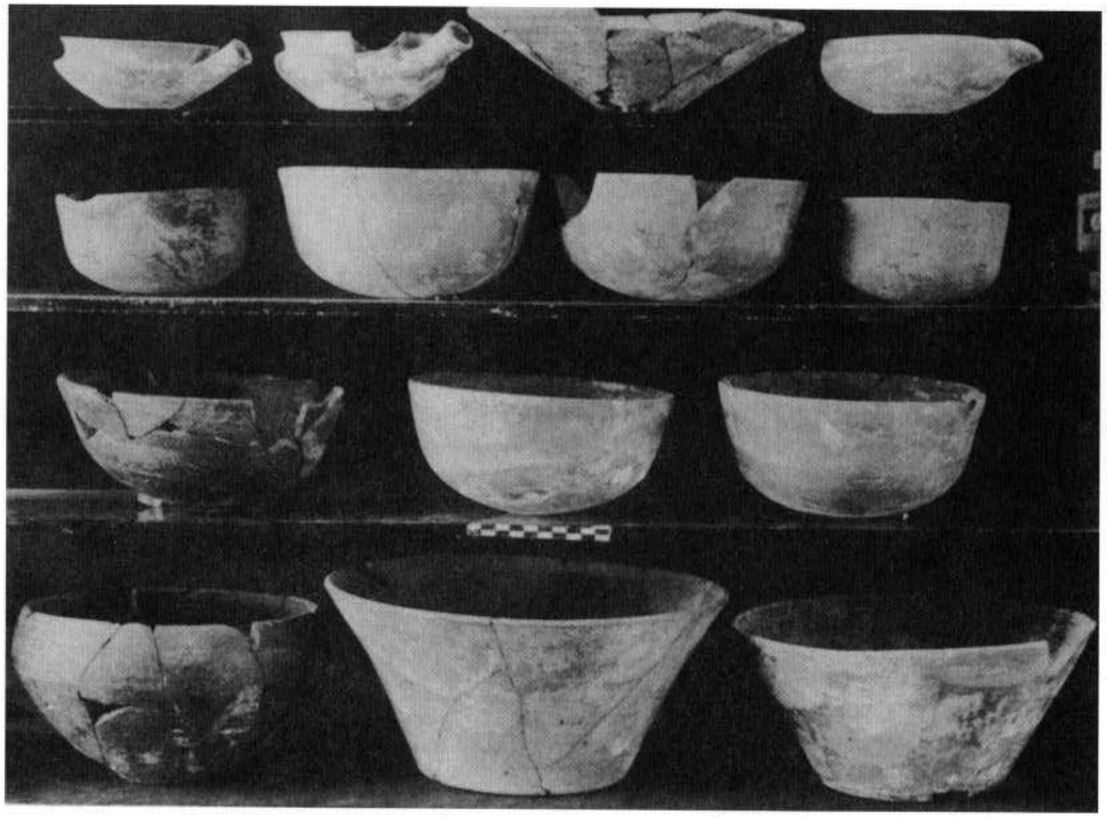
c



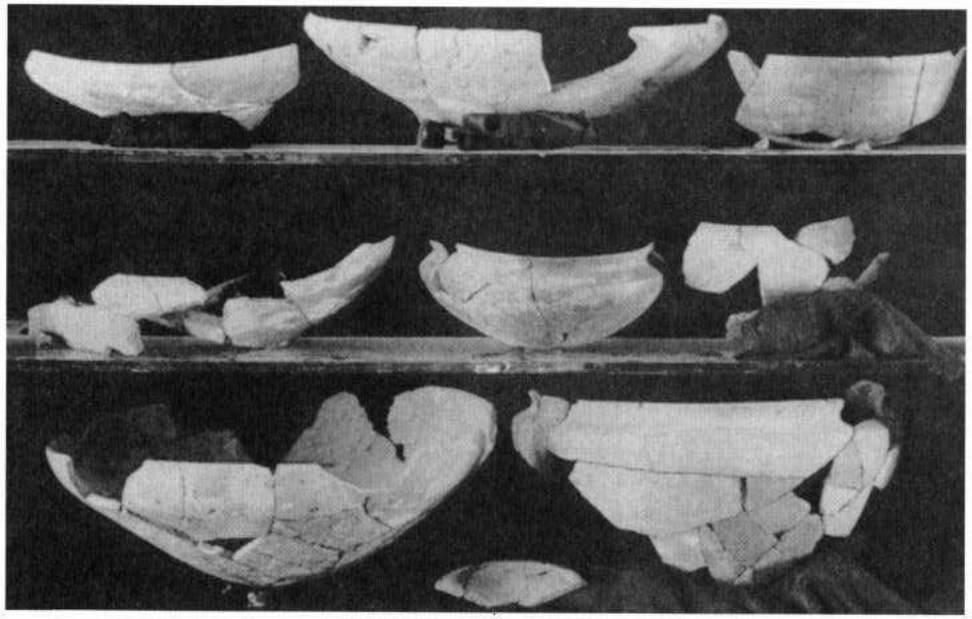
d



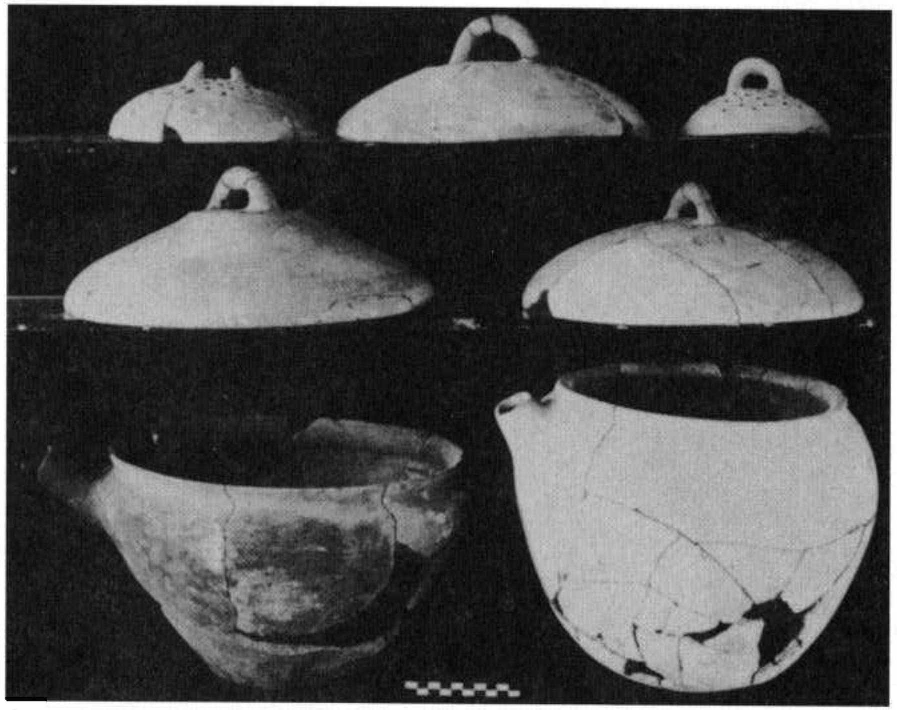
a



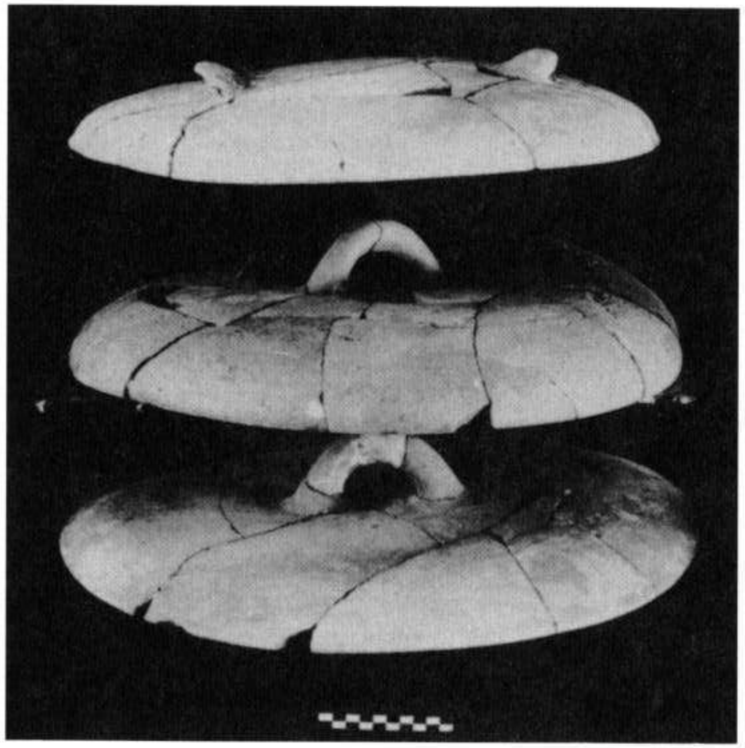
b



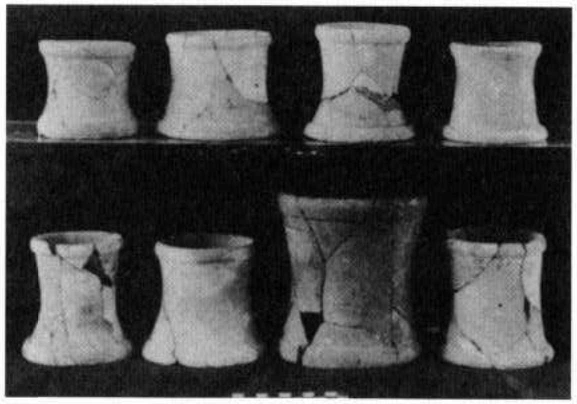
c



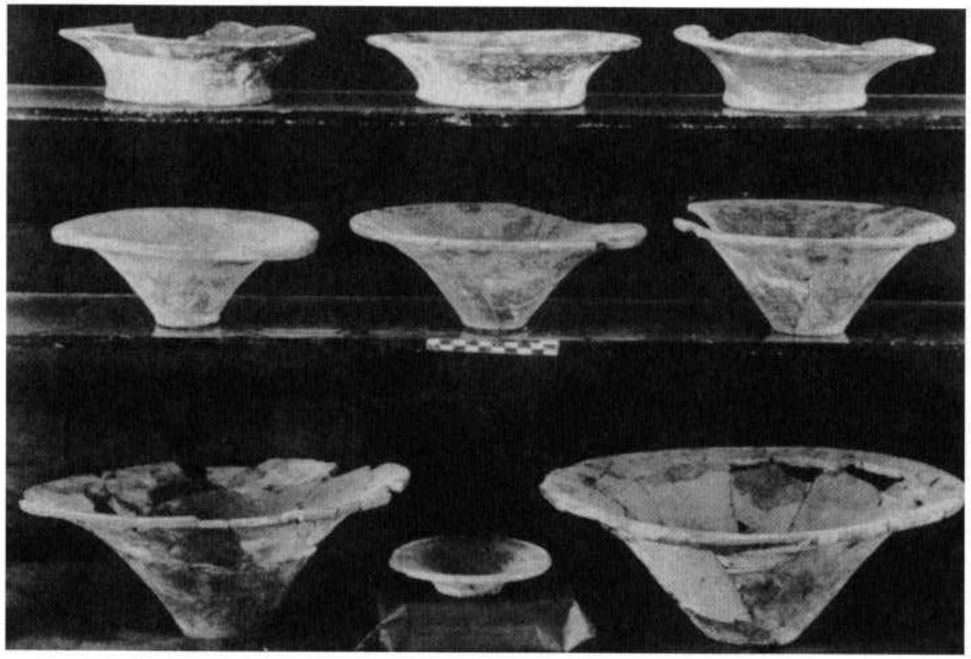
d



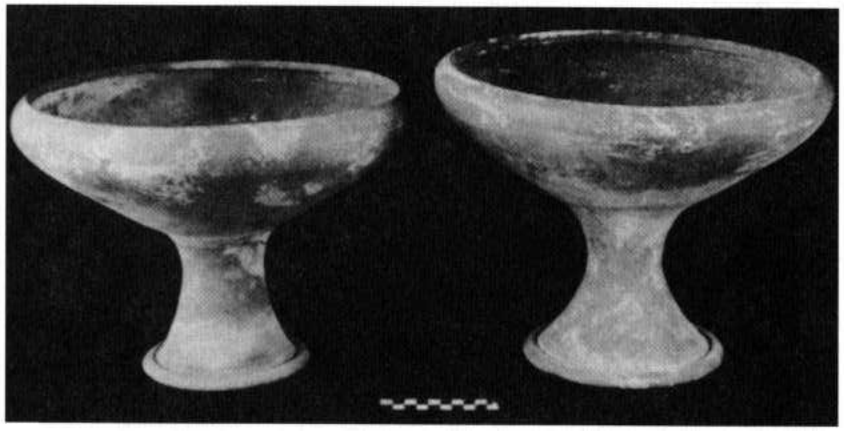
a



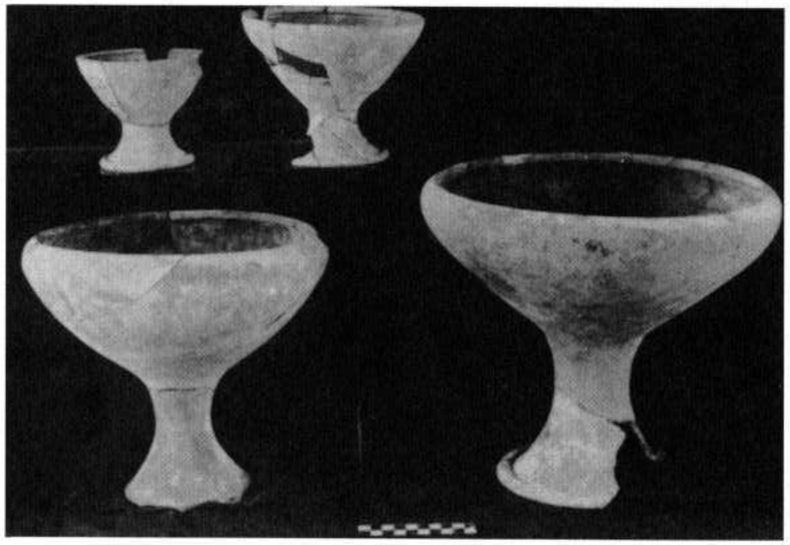
b



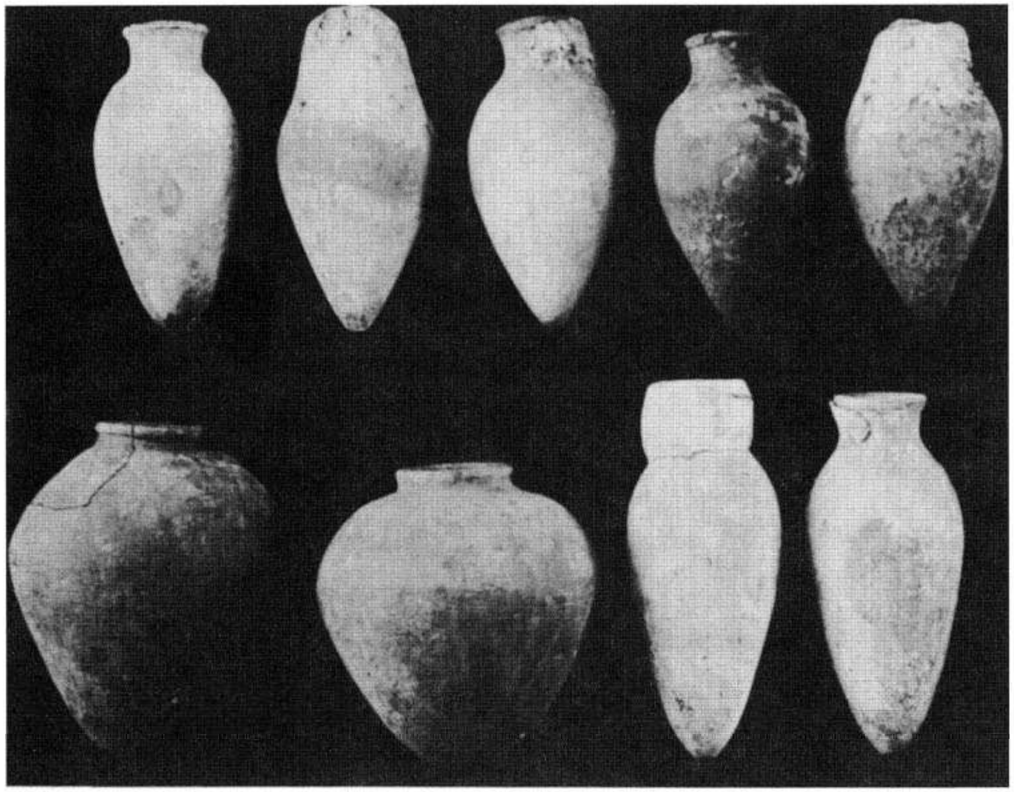
c



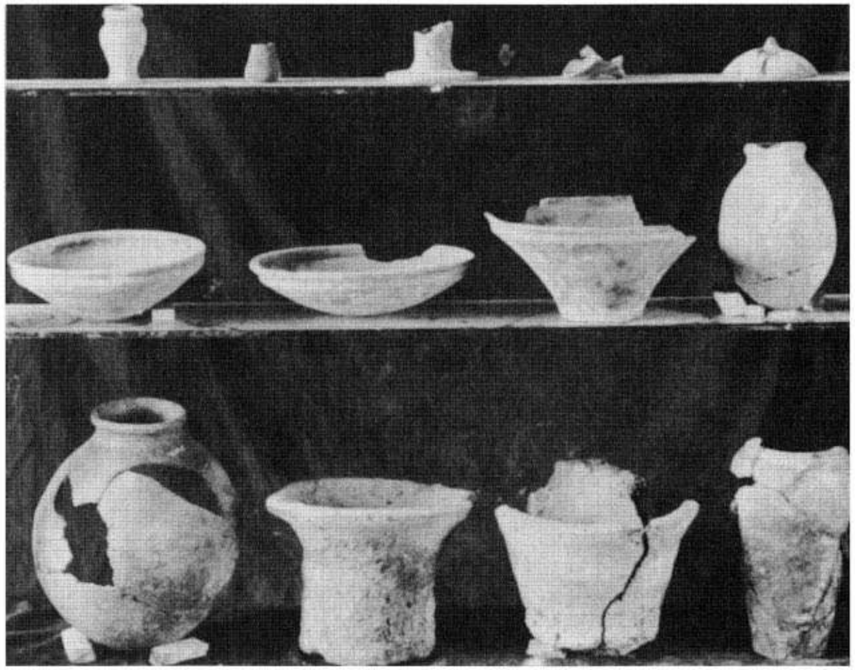
d



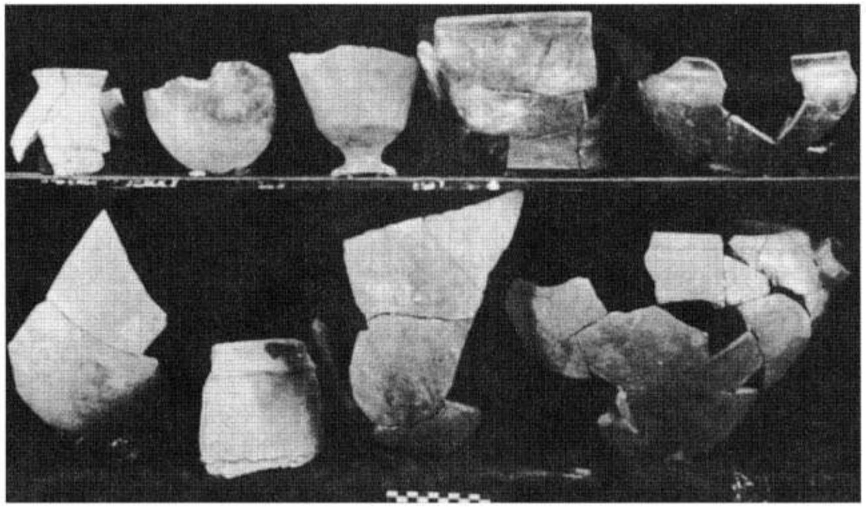
e



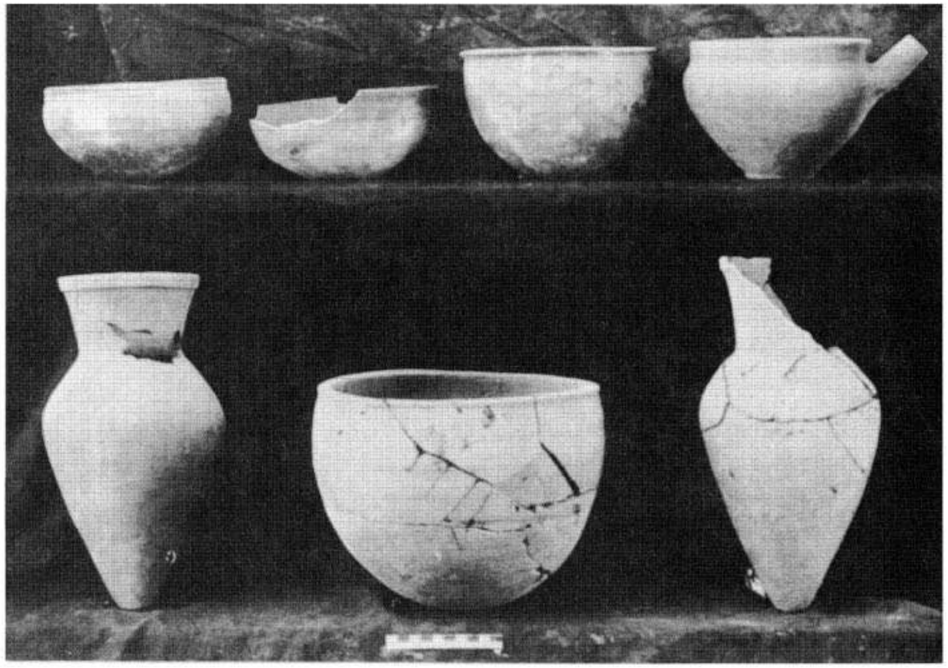
a



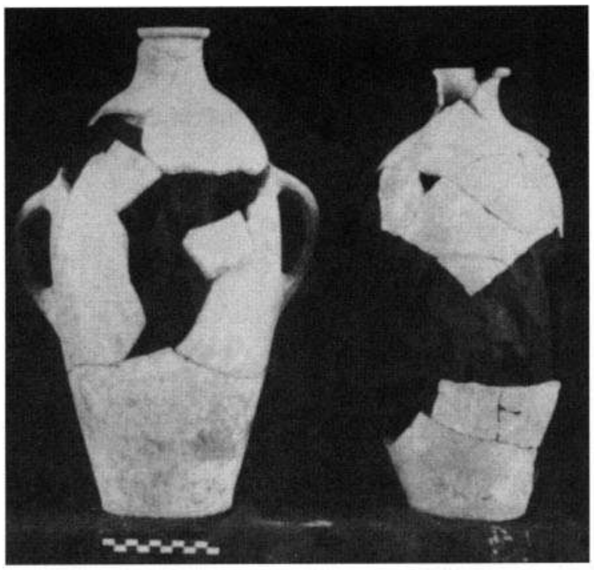
b

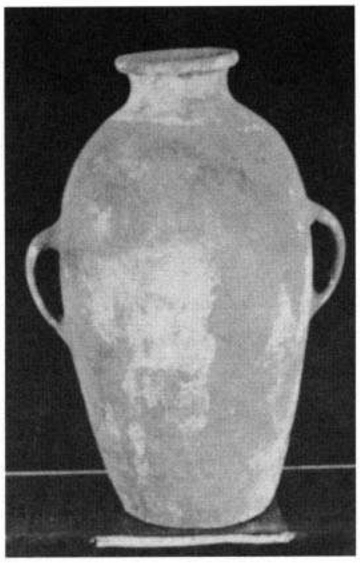


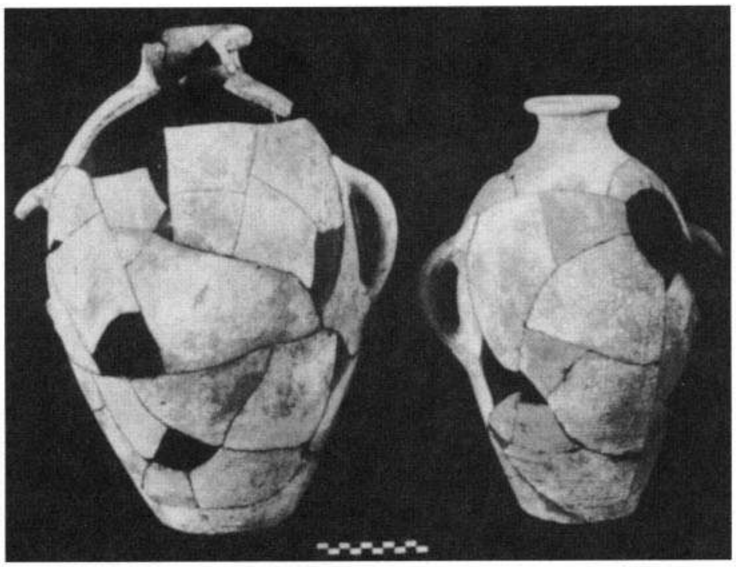
c

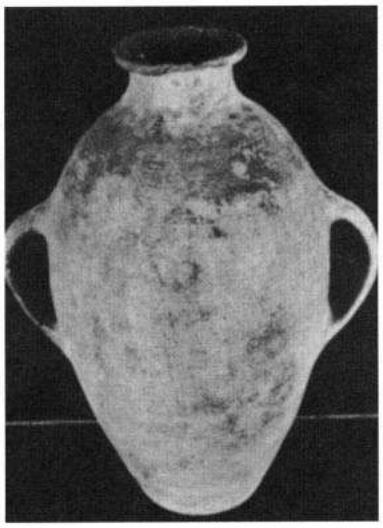


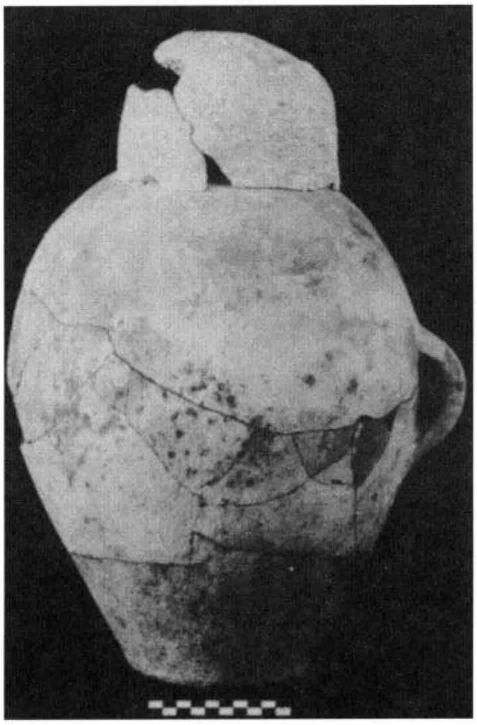
d


a

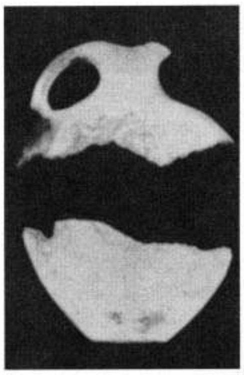

b

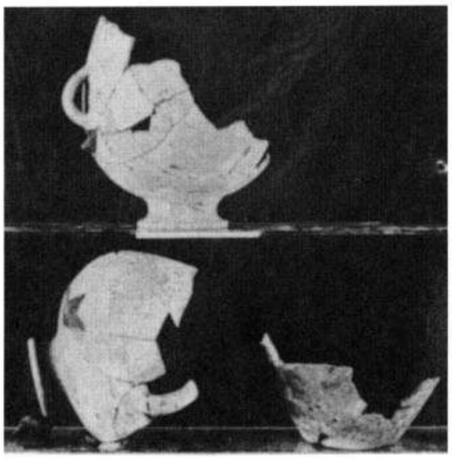

c

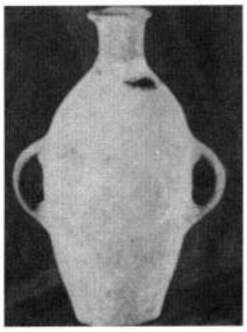

d

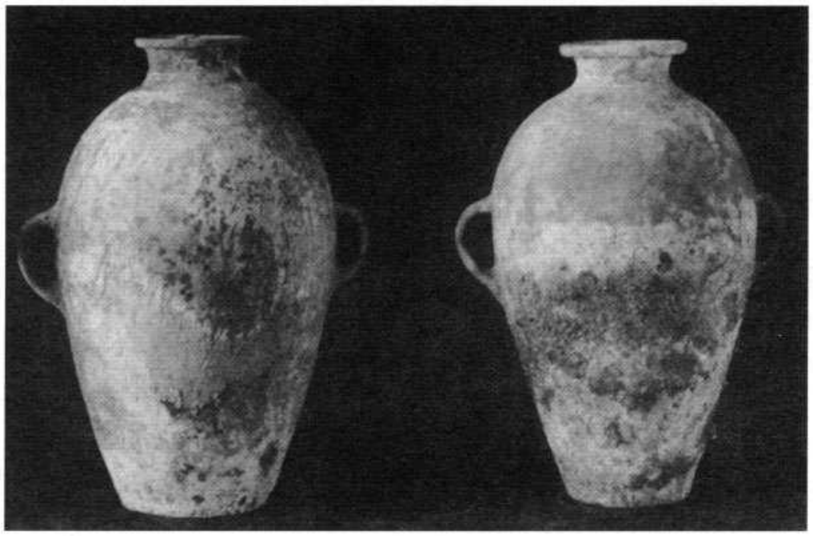

e

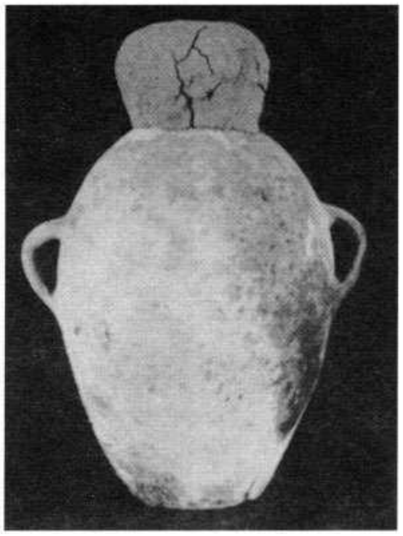
f

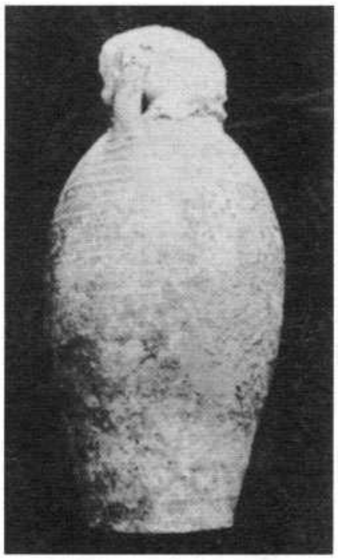

g

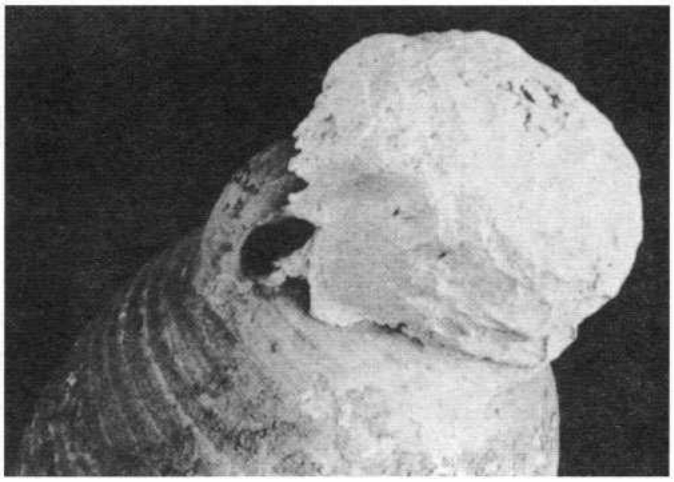

h

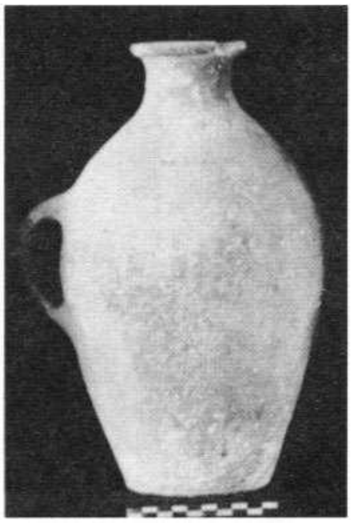

i

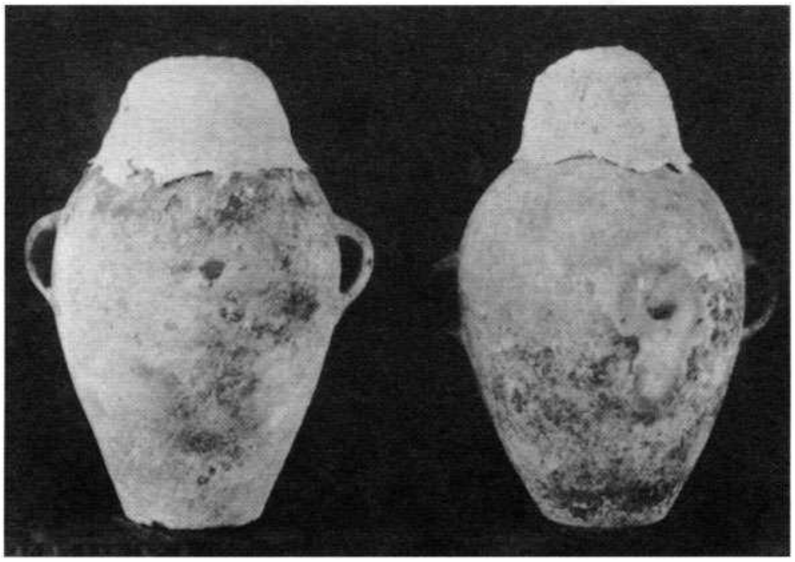

a

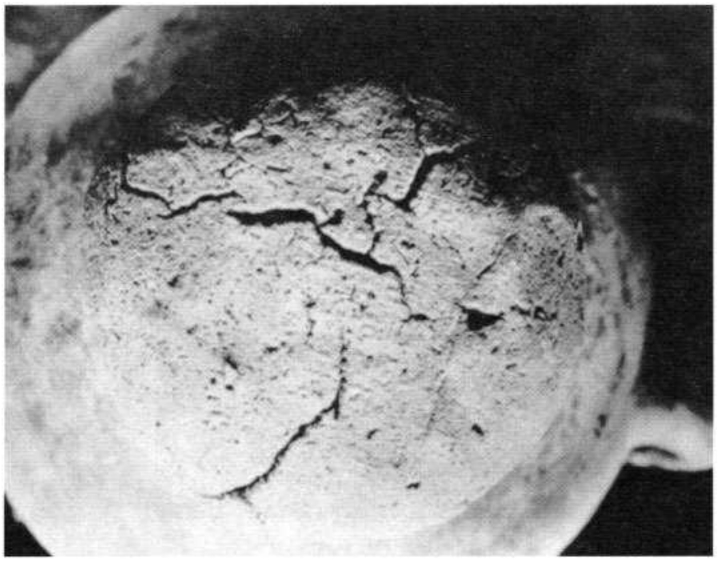

d

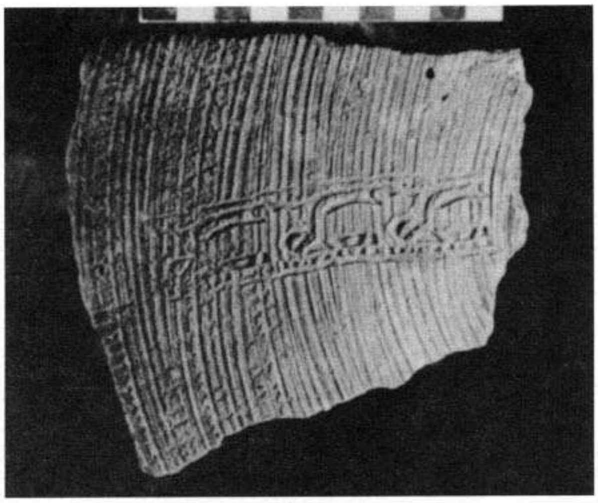

b

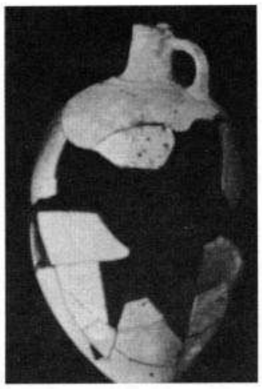

c

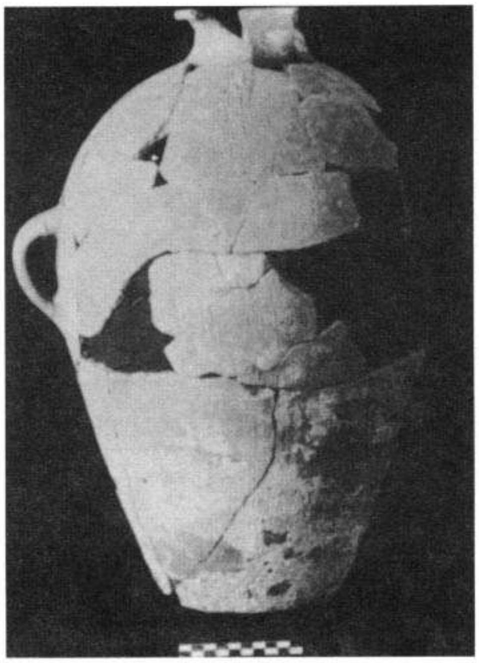

f

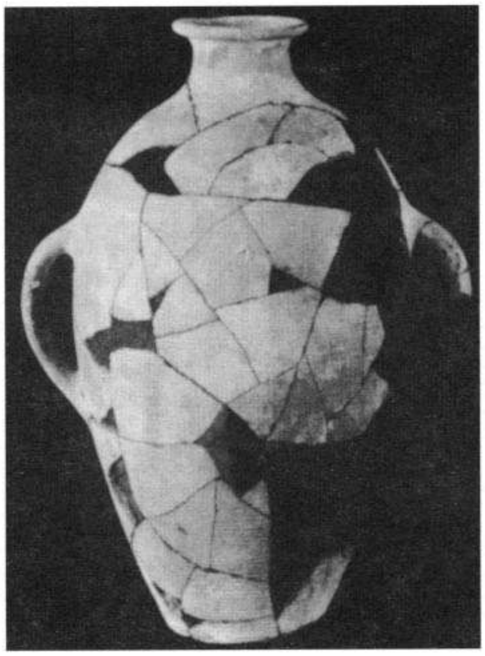

e

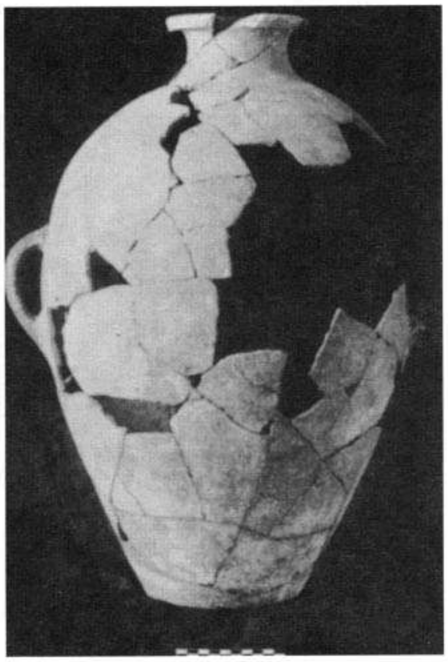

g

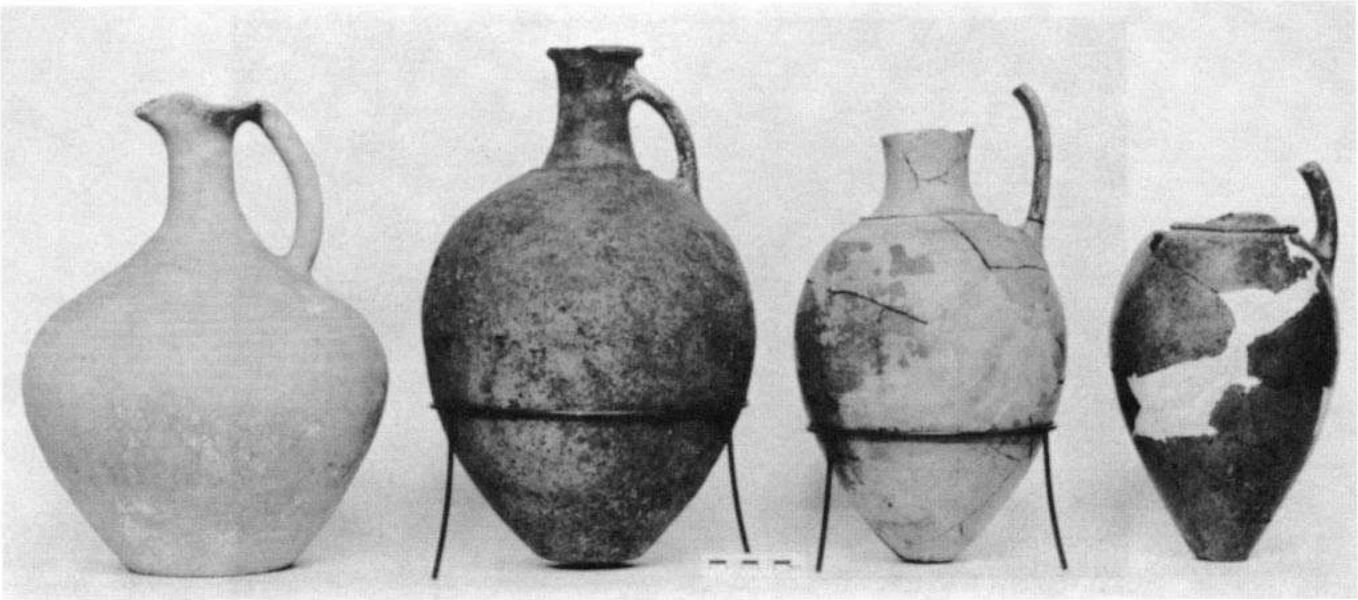

b

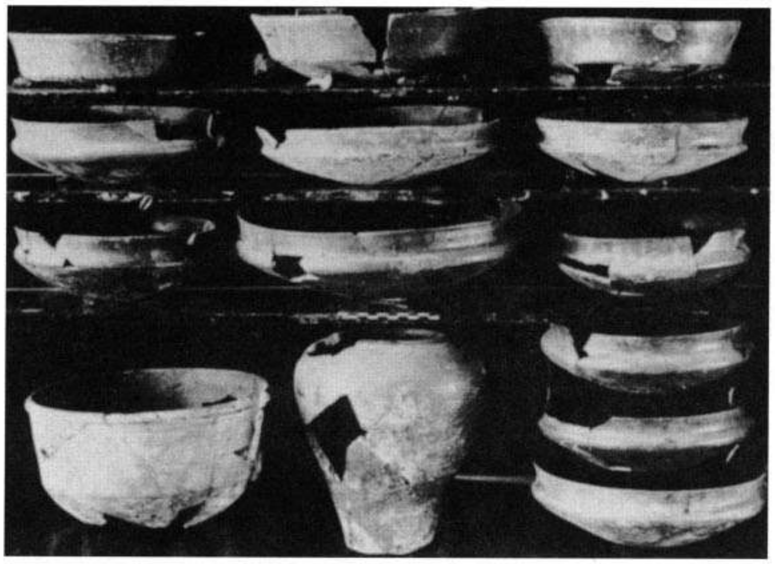

c


a

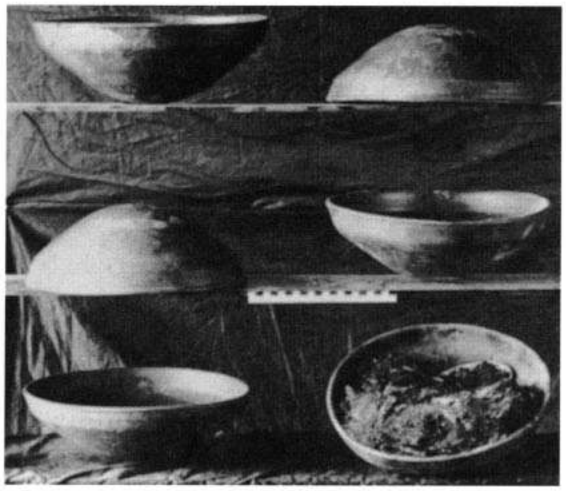

d


e

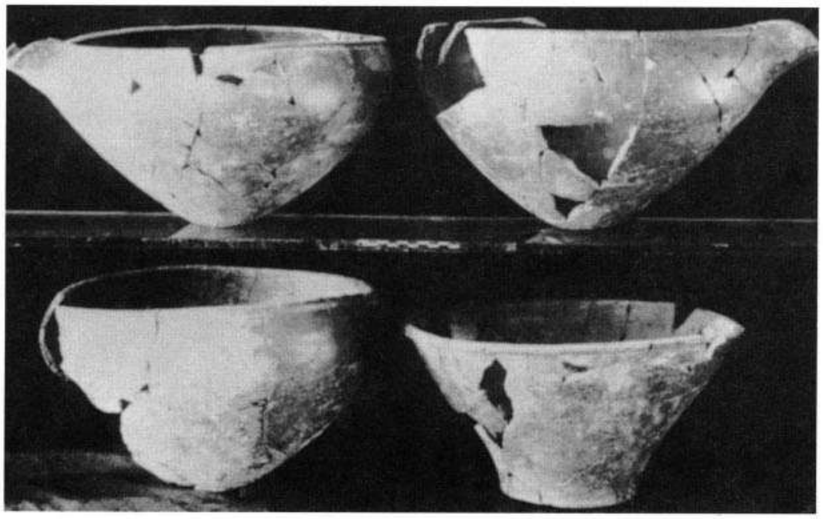

f



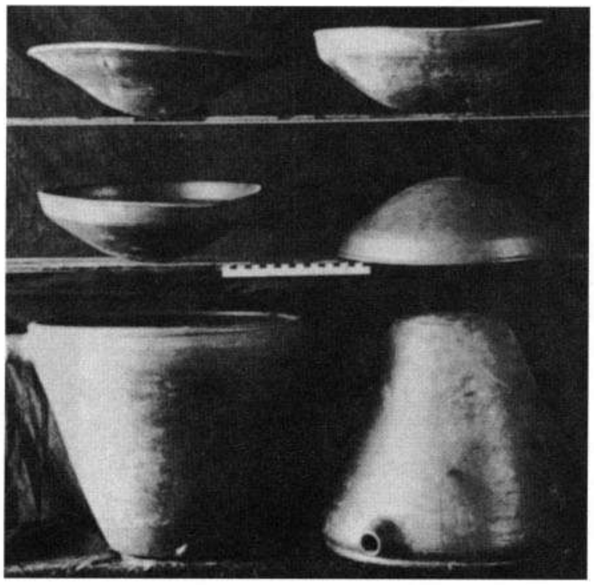
a



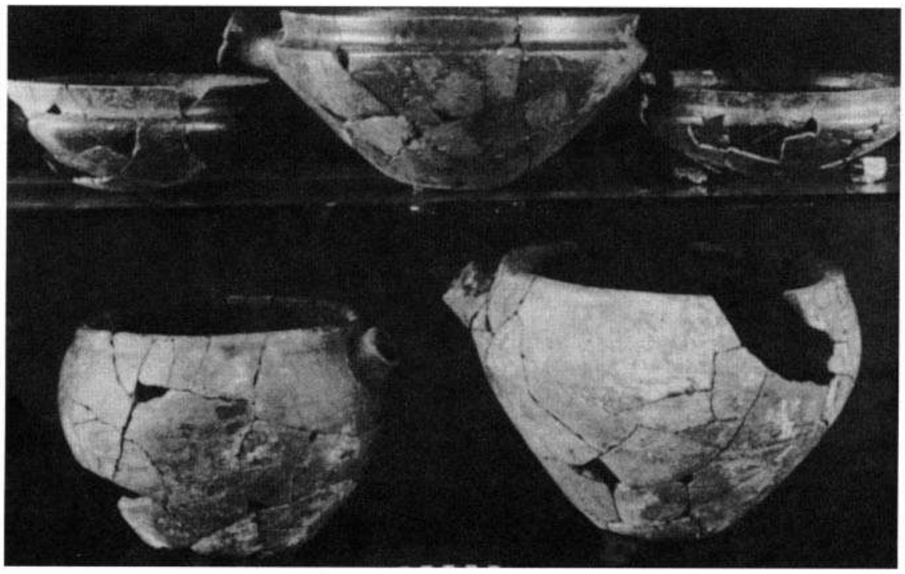
b



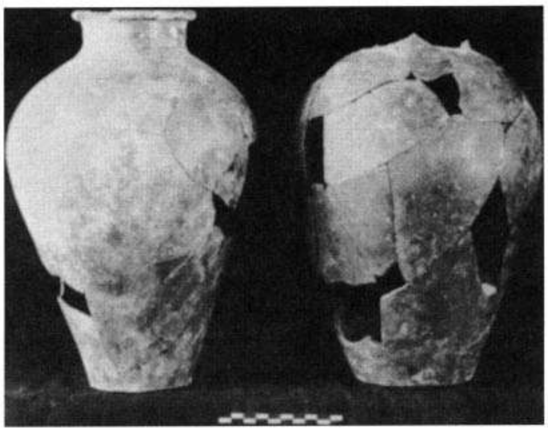
c



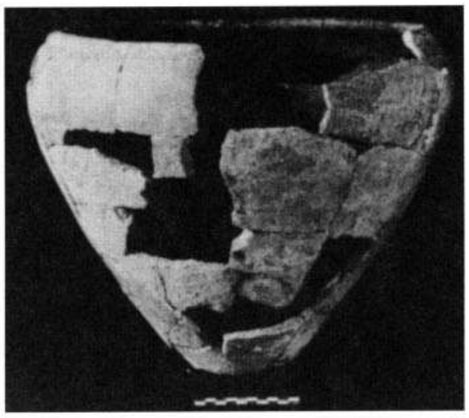
d



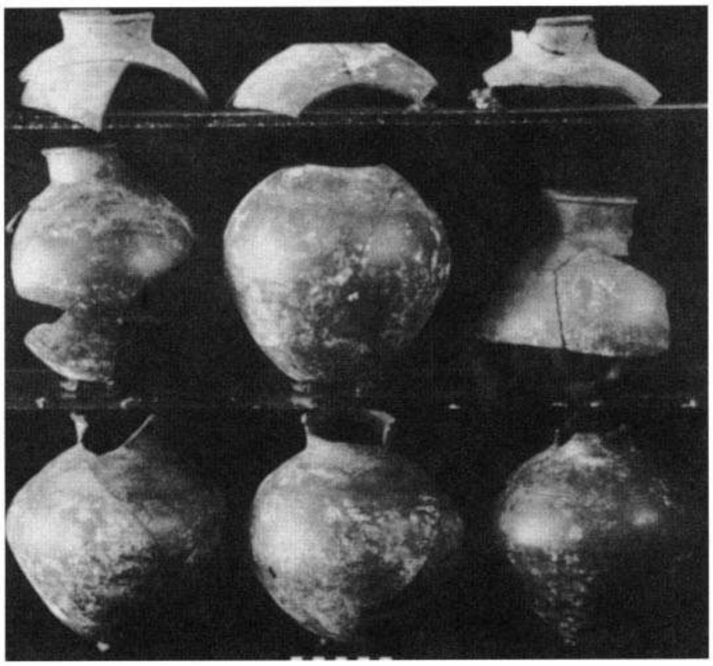
e



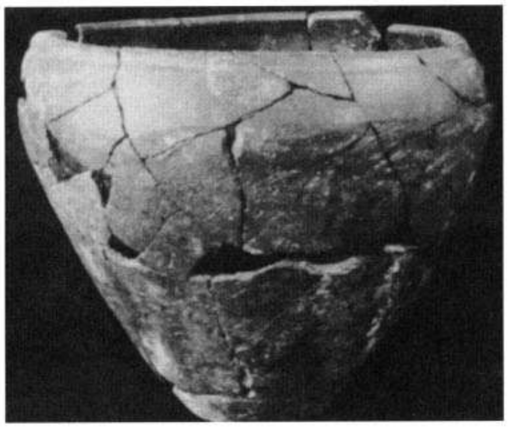
a



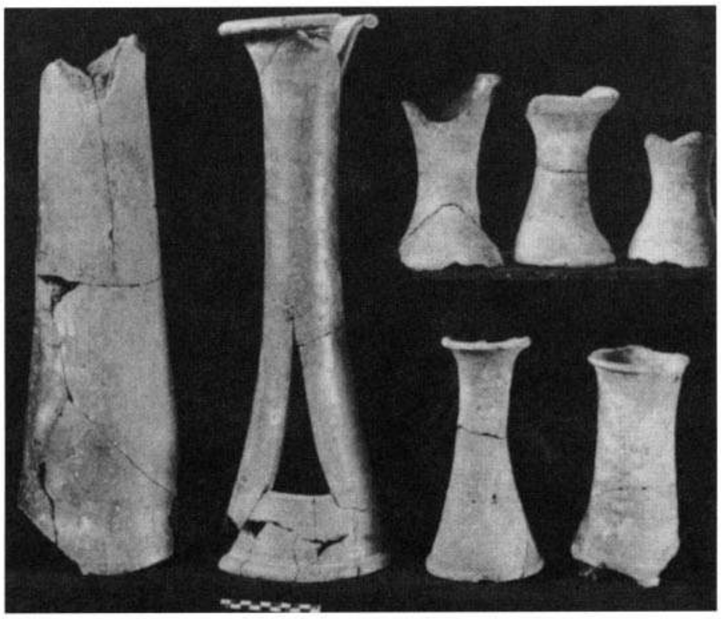
b



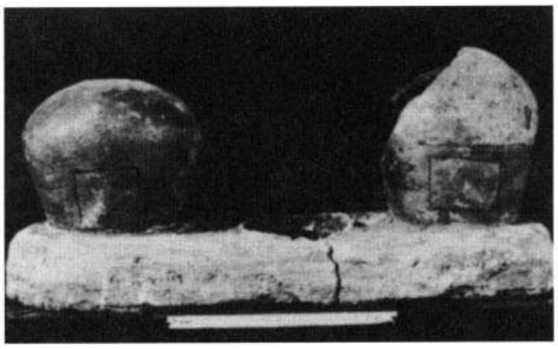
c



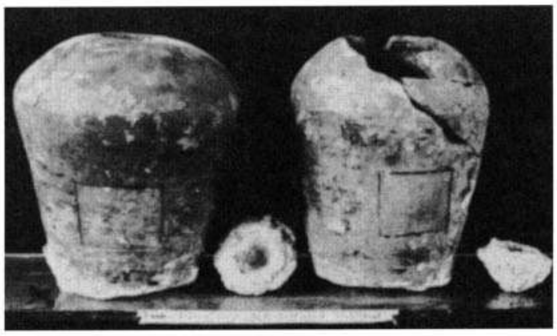
d



e



f



g